

IN THIS ISSUE || **THE NEW YORK TO BUFFALO ENDURANCE CONTEST.**
OBSERVATIONS OF A PASSENGER.

Vol. III. No. 10.

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The Automobile

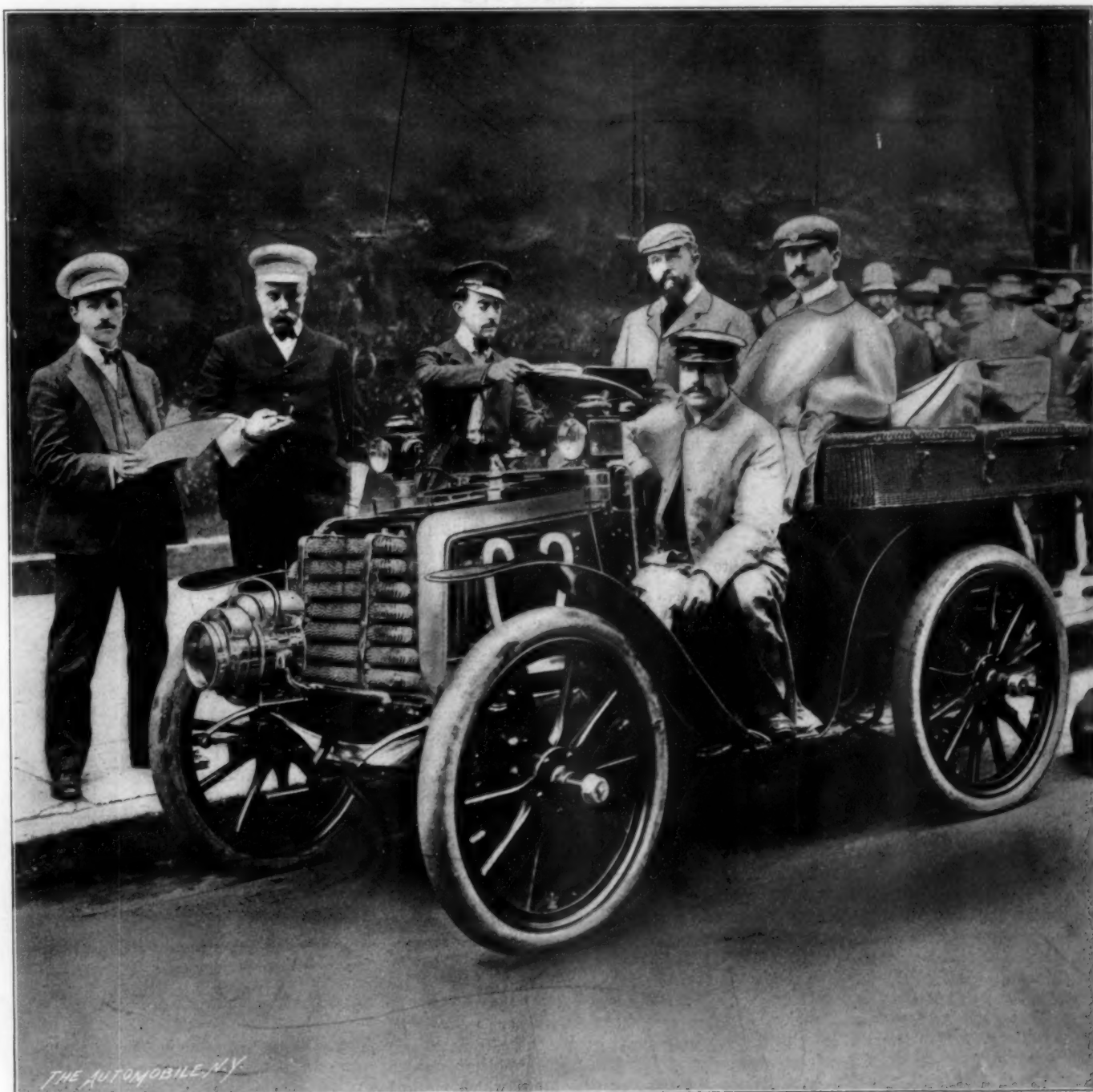
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THE ENDURANCE CONTEST: PRES. A. R. SHATTUCK AND MR. J. DUNBAR WRIGHT, IN THE FORMER'S 12-HP. PANHARD.



Start of the Run, The Plaza, Sept. 9.

THE NEW YORK-BUFFALO ENDURANCE CONTEST.

Observations of a Passenger.

It was my good fortune, after a previous arrangement for passage in the endurance run had fallen through, to obtain a seat in Mr. Edgar Apperson's phaeton, officially B 4. This place had originally been intended for Mr. Henry S. Chapin, but Mr. Chapin was unable to go beyond Poughkeepsie, and, while I was sorry for him, I had abundant reason to congratulate myself, since I could not have viewed the run from a better point of vantage.

IMPRESSIONS AT NELSON HILL.

Going to Peekskill by train, I was enabled to get a good view of the Nelson Hill contest from one side. The results of the contest are elsewhere recorded, but I may here confess that, to me at least, the most striking impression given by the whole affair was of the enormous difference in reserve force between the average automobile and the horse under such conditions. Very few of the machines seemed to have power to spare, and on the "thank-you-ma'ams," which themselves were veritable hillocks, many of them were on the verge of stopping altogether. Much of this was due to the surface, whose sand was loose and quite deep on each side from lack of rain, and to the generally stony and rough character of the road. The 17 per cent. slope of the steepest part of the hill would have been equivalent, I should think, to 20 or 22 per cent. on macadam. That is quite a respectable grade, but it is certainly fortunate that such grades do not abound, since, while it is true that hill-climbing power is mainly a question of gearing and of the strength of wheels and axles, still

it is equally true that an automobile built to climb Nelson Hills every day would be quite unsuited for pleasure riding on good roads.

As to the performance of the vehicles, there seemed to be little to pick between the steam and gasoline classes. Many of the latter were not geared for such a grade, and when they struck the thank-you-ma'ams it meant dismounting and pushing, if not a tow. The steam carriages, on the other hand, all seemed to have sufficient tractive force if the pressure did not drop, and their speed was governed mainly by the steaming power of the boiler. A number of drivers, trying to rush matters, got short of steam and had to stop and wait for more.

The management of the signal flags at the bends was noticeably deficient, and a fast machine was frequently started just back of a slow one, resulting in many blockades and much complaint. One or two vehicles were allowed a second trial on this account, and others have entered protests. The sensational performance of Bishop's 30 horse-power Panhard was enhanced by his brilliant steering around a blockade of this character. He was charging up the hill behind a galloping horse, and, meeting several stalled vehicles, he quickly turned into the narrow ditch, swept past them, and rushed on up the hill without the loss of an instant. His speed for the 2,372 feet of hill and 542 feet of approach averaged over 16 miles, and it could hardly have been less than 12 at the steepest part of the ascent.

The streets of Poughkeepsie presented a picturesque scene that afternoon and evening, as vehicle after vehicle came up to the red flag or lantern which marked

the control, had its time taken, and rolled on through the curious throng to the storage station. The lobby of the Nelson House was crowded, and the results of the hill-climbing contest, announced that evening, were eagerly discussed. The weather was fine, and, except for the dust which had thickly coated all but the advance guard, no one seemed disposed to grumble at the roads. Enthusiasm and confidence were general, and the fact that the contestants were already decimated, eight out of seventy-nine having fallen by the wayside, seemed to daunt none of the survivors.

TUESDAY MORNING: MOSTLY RACES.

Mr. Apperson ate a leisurely breakfast Tuesday morning, while his machine stood in the waiting line; but when at length he emerged from the Nelson House, after letting some fifty-five machines start ahead of him, it became evident that his tardiness had not been wholly accidental. "Quick, Stearns, and let me go; I'm in a hurry to-day. I'll tell you why to-night," said he, with a grin, and Walter H. Stearns, who was busily dispatching the machines at half-minute intervals, laughed and gave the word. The reason for his haste was not far to seek. A few blocks of rather elastic "eight-mile" speed—which was quite unnecessary, for all the town was gathered to see us off and give us the road—and we were soon skimming away towards Rhinebeck, with five Gasmobiles and four Wintons somewhere ahead of us, and fifteen miles of good roads before we should hit the sand.

The Wintons had an early start, and, except for H. Rogers Winthrop's eight horse power machine, which we passed, stuck



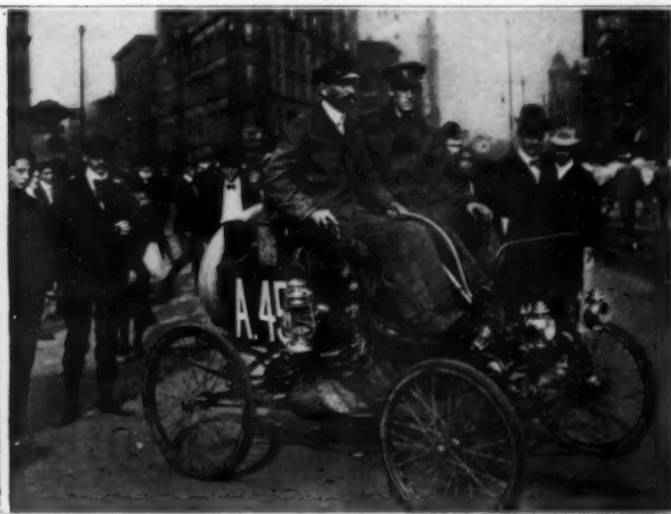
C. A. BENJAMIN IN HIS LOCOMOBILE.



THE STEARNS STEAMER; T. E. GRIFFIN STEERING.



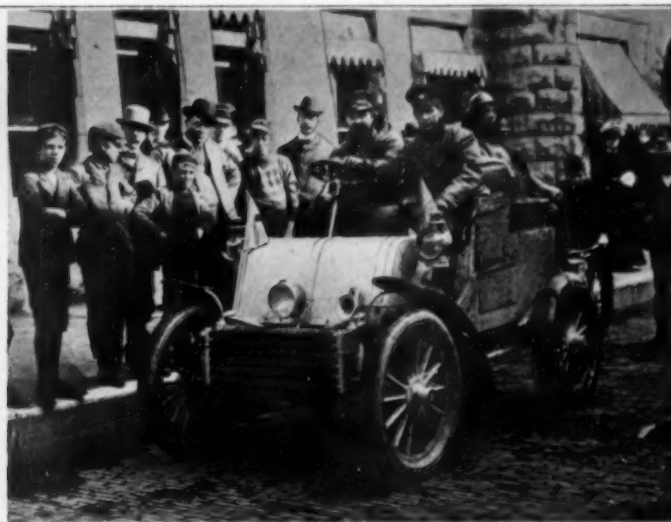
A WHITE STEAMER JUST IN.



B. L. WRIGHT AND C. E. GROUT.



THE APPERSON BROTHERS IN B 4.



DR. T. J. MARTIN AND ELLICOTT EVANS.

SOME OF THE LEADERS.

somewhere near Blue Store, we did not see them till we got to Hudson; but the Gasmobiles were just ahead, and Mr. Apperson was looking for scalps. The road was wide, the chauffeurs had it practically to themselves, and the brief opportunity for a trial of speed was gladly seized.

A string of motor bicycles was the first to exchange dust with us, and a DeDion quickly followed. It was dust a-plenty, too, and the cloud ascending from the wheels of the fifty-odd machines ahead of us could have been seen for miles. My companion wore a mask, but I, foolishly relying on the fifteen-mile speed limit, was unprovided. I shall not soon forget what my handkerchief looked like when we got to Hudson.

The Geneva steam runabout and A. R. Townsend's Toledo were the next to fall behind us, with another steamer whose identity I missed. Mr. Otto's white Gasmobile had stopped for something or other, and was the first of its tribe to fall victim. The road was leading past pretty residences on one side and orchards and truck gardens on the other. It undulated up and down six or eight per cent grades, and the middle speed of our carriage came in handily once or twice. On one such ascent we passed Dr. Truman J. Martin, Mr. Riker with his new (much too new, as it proved) 16-HP. touring car, a Searchmont, and a Pierce runabout, all in a bunch together.

On a level stretch beyond we saluted Mr. Fischer (whose rig was *not* standing still), as we passed him. Probably, however, Mr. Fischer was not trying to race. If so, he made amends for the remissness later on. He certainly seemed rather easy then; but when, a few minutes later, we sighted Colonel Astor's red Gasmobile, we found a conundrum of another order. Col. Astor saw us, too, and he promptly "let her out." It was a very pretty race indeed for two or three miles, with neither able to gain much on the other. In the thick of it we passed four machines, one being Jefferson Seligman's Columbia runabout, driven by H. P. Maxim at a gait which, for a Columbia, rather surprised me. Another was Mr. Rianhard's Victor steam carriage, which was in the ditch looking badly used up. We learned later that in turning out at high speed for another machine he had struck a thank-you-ma'am and had lost control of his vehicle, which went into the ditch and turned turtle. Luckily Mr. Rianhard and his companion escaped with severe bruises; but the moral as to wheel-base was obvious.

In our scurry we overhauled another Gasmobile—H. R. Taylor's—which immediately joined in the flight. Mr. Apperson was creeping up on both machines, but Astor's was so speedy that we had begun to think that we should have to wait for a hill before we could pass him, when, almost simultaneously, a man on his machine and a man on Taylor's lost their caps. We passed them while they were

recovering the headgear, and saw no more of them that morning.

A White steam carriage, driven by Paul H. Deming, led us a stiff chase for a mile, and followed us closely for some time after we passed it. John H. Flagler's white surrey, driven by Charles Meyer, and Sidney Dillon Ripley's phaeton, finished the list of Gasmobiles, and with them ended the racing. The other Victor and the Knox three-wheeler were passed before nine o'clock, making altogether twenty-seven machines in less than forty minutes.

Beyond Rhinebeck the roads became sandy and poor, and we moderated our pace, passing other machines by virtue rather of greater power and of Mr. Apperson's skill in driving than by speed capacity. Just beyond Red Hook, where we were going at a conservative speed in a piece of sand, Meyer passed us with a rush, his long wheel-steered machine having a great advantage there. Near Upper Red Hook we passed Mr. Field's 5-HP. De Dion machine in the ditch and apparently out of the run. We shouted condolences, but we afterwards found that part of them at least were not needed, for he and his vehicle turned up at Albany while we were at supper. It appeared that, when approaching another machine rapidly, he had found his brakes too loose to slow up quickly, and so had tried to get by. To do this he had to run on the outer edge of a plank bridge over a gully in the road, and the ends of the planks, being rotten, had given way. The damages amounted to a bent front axle, broken ball cup, battered cooling coil and broken pipe connections, all of which were patched up sufficiently to allow the machine to run. The same machine was ditched again beyond Oneida, and was turned over on its side beyond Rochester, but nevertheless it got into Buffalo on Saturday under its own power.

Near Blue Store and Nevis the roads were very bad, in some places being "repaired" by dumping loose sod and turf on them. In some such a place we passed the Duryea three-wheeler, but a little later it passed us again, going down-hill like mad. Besides these, the only thing to pass us that morning was W. L. Stoneburn's Regas bicycle, and we got into Hudson in early season for the opening of the control, with a record of forty machines passed and a debit of three, and without a stop since we left Poughkeepsie. There were sixteen machines before us, and Elmer Apperson, who had started just ahead of us and whom we had passed, owing to his magneto generator working poorly, was but a few moments behind, with McMurtry between. David Wolfe Bishop was first at the control, as usual, with McGregor second, and two Packards, driven, respectively, by W. A. Hatcher and by J. W. Packard and George L. Weiss, third and fourth. President Shattuck was fifth. The Wintons of Alexan-

der Dow and Percy Owen, the four White steam carriages, the Packards of Satterfield and Dr. Martin, and the Rambler gasoline runabout were not far from the front.

In fact, a noticeable feature of almost every control was the leading position held by the above machines. Among the other steam carriages, C. Arthur Benjamin generally got the foremost place; and one or more of the Gasmobiles could always be counted on for a position in the front row, though the rather frequent minor stoppages of these machines, apparently to remedy ignition troubles, prevented them from bunching like the Packards and the Whites.

TUESDAY AFTERNOON: ROUGH ROADS AND A RAINY FINISH.

The first half of our afternoon's run, from Hudson to Kinderhook, lay through a picturesque country of woods and hills and streams, through which our road wound in a constant succession of grades and turns. The surface was sandy and stony, and fast time was impossible till we got beyond Kinderhook. Even then the improvement was due more to the level character of the country than to any bettering of the roads, which exchanged stones for sand and were unpleasantly narrow.

As in the morning, we started late, between 30th and 35th in line, but this time we travelled slower and saw fewer machines. Those passed included a Searchmont, Skinner's motorette (the latter in a ditch, whence it was later extricated in time to reach Albany before the control closed), the St. Louis, a Toledo, another motorette, Mr. Otto's Gasmobile (standing), the Baldwin steam delivery wagon, the U. S. Long Distance rig, the Knox three-wheeler (being pushed up a sharp rise near Stuyvesant Falls), the Grout stanhope (also being pushed up hill), Alexander Dow's 12-HP. Winton and the Lane Bros. surrey, a motor bicycle (unidentified) and the two Pierce runabouts, the White runabout No. 11, a Stearns steamer, Foster steamer, and a Winton. Most of these were passed on up-grades, where our middle gear gave us a great advantage.

We passed through Kinderhook, where, as everywhere, a large and cordial crowd was assembled to point out the route and tell us to "let 'er go;" and soon afterwards the clouds, which had been thickening since morning, began to send down a drizzling rain. We passed Mr. Shattuck and Mr. Wright in the former's Panhard, making ready for the weather by the unfurling of ample hoods, capes, and storm aprons; and not much further on they passed us similarly engaged. Mr. Shattuck, bowling along in leisurely fashion, was evidently quite content to make his 14 or 15 miles an hour; but my companion, who argued that so long as he did not force his own rig he had best save

time which might be needed later, quickly overhauled the president of the club. Mr. Shattuck let us pass, but I am much afraid he did not approve of us.

In justice to Mr. Apperson, however, I will here say that at no time while I was with him did we frighten a horse beyond the harmless dancing indulged in by perhaps one animal out of four. Indeed, except that the fact of his traveling against time made him occasionally unwilling to stop or give half the road on a slippery surface, I could not see that his speed made the slightest difference to anybody. We met cranky drivers—a few of them—who would doubtless have liked to see us legislated off the road altogether; but the cases where a lessened speed would have smoothed matters were notably few, and by far the larger portion of the public, including even the horse drivers themselves, watched us with friendly interest or shouted words of encouragement. In the country towns the impression seemed very general that the event was a race pure and simple, and we were usually greeted with a "Hurry up!" "Six ahead of you, mister," or "You're 'way behind." "Let 'er go!" was the most frequent welcome, even when there was a policeman with a green flag on the opposite corner; and this formula, repeated when the unspeakable condition of the streets made even an eight-mile speed perilous to rig and to limb, had sometimes a strong flavor of the comic.

We were not racing Tuesday afternoon, but we had to open up a bit to pass the White runabout.

"Do you know," said my companion, "those little White steam carriages are the toughest proposition to pass that we have had on the road, barring the French machines." And they were, with perhaps the further exception of the Gasmobile surrey and the Duryea three-wheeler, when the latter were running. We had frequent occasion thereafter to admire the regularity and sustained speed of this trim little quartet. We could always pass them, but it was never a "cinch;" and their inherent slowness on the steeper hills was more than made up at other times.

A light rain was falling when we crossed the Hudson into Albany just before the opening of the control. On the precarious grease of the Albany block pavements we got our first taste of the skidding which was afterwards to be our lot in such bountiful measure. We didn't hit anything, but it was pretty ticklish going, and the Gasmobile surrey, trying to negotiate a corner, spun half around. Just ahead of us was the Foster steamer, which we had passed and which later passed us while we were putting on our storm clothes. The right rear wheel was badly buckled, presumably by a skid, but the occupants had come into Albany without knowing that anything had happened. For ourselves, we had had no trouble of any sort, our only stop having been the one just mentioned.

We stabled, with most of the other machines, at the Empire Curling Rink, a place which automobilists will do well in future to avoid like the pestilence. The floor of this establishment is a soft, damp sand, in which the wheels of nearly all vehicles sank inches deep, some of them, after braving the terrors of Nelson Hill being nearly stalled, and getting out of their own ruts only after desperate exertions.

As at all the night controls, the rink presented a most animated scene, nearly every machine seeming to require some attention. Our own, outside of the regulation cleaning, filling of tanks, oiling and general inspection, only needed the chain tightened. Mr. Apperson said that this had not been done since the machine had left Kokomo on its run to New York, just before the endurance test; and as the chain is short and heavy this did not seem improbable. The light steam carriages appeared to require the bulk of the repair work, some of them being almost rebuilt; and this was but natural, as they were palpably not intended for such roads, and even a fifteen-mile average speed in ruts, sand and stones was too much for them. Apropos of chains, the attention bestowed on those of Mr. Bishop's Panhard might well be imitated by all other users of chain driven machines. They were brushed clean at every control, and grease freely applied to both sprockets.

The stop at Albany saw several changes made in the personnel of the contest. Mr. Astor and Mr. McGregor went back to New York, their vehicles going on in charge of Alexander Fischer and Percy Owen, respectively. Mr. Riker, whose car, like the Searchmonts and one or two others, was practically just out of the factory, had found his spring too light for the rough roads, and had wired for a fresh set. I understand that the change was made that night at Albany, but the Riker car, if it left Albany, was never timed at any later control.

WEDNESDAY MORNING: THE ENDURANCE PART BEGINS.

White clouds were adrift in the sky when we got the starting word at the rink on Wednesday. That morning, mindful of the dust which had choked and blinded us on the two preceding days, we were third in line, with only Mr. Bishop and a Stearns steam runabout ahead of us. We had hurried to do it, however, and, once started, Mr. Apperson ran slowly while I tied a bundle, letting several machines get past us. Mr. Scarritt, who was slated to ride with Mr. McMurtry, was in Bishop's machine just then, doubtless to see that the racing was not begun too soon, and we had a good rear view of "C 55" for a mile or two before Mr. Scarritt resumed his regular place. My companion was not feeling quite fit that morning, and before he braced to his work he nearly contrived to run us over a bank into

the river, at a sharp left turn just out of Albany. He did not repeat the blunder, but he made no attempt to race that day.

Indeed, there was little enough chance for speed competition. The fine road lasted possibly two miles, and was succeeded first by dirt and then by the sand for which the roads from Albany to Schenectady are famous. Our route did not follow the direct road between the cities, along which the cycle path runs. For the reason, I understand, that the latter was being torn up to lay a trolley line, we took a more northerly route via Latham corners and Niskayuna.

Mr. Ripley's Gasmobile and Mr. Flagler's surrey, which had started a little behind us, were among the bunch that passed us at the start. We passed the former a few miles out of Albany, stopped for some cause that proved to be trifling, and the latter near Schenectady. Approaching the latter city, we passed the Baldwin delivery wagon, E 17, in tow. I believe it gave up at that point, and it was no great loss, for the wagon, while possibly capable in city service, was absurdly under-powered for cross-country work.

The roads were wretchedly rough and stony through Niskayuna, but fine through Schenectady. They were afraid of our speed in Schenectady. A policeman held the green flag and called out, "Eight miles an hour through here!" "All right, cap!" responded my companion, with a great display of reducing his pace. A block beyond he pushed the button down again. "We won't go more than fifteen, anyhow," he murmured. Possibly it was sixteen in spots, but he made no trouble and nothing happened.

From Schenectady our route paralleled the Mohawk River and the New York Central, over roads good for a few miles and then poor, being now sand, now red earth, now black loam, and so narrow that in most places it was hardly possible for two vehicles to pass each other. We had got half-way to Amsterdam when a shower broke upon us in force. Mr. Ripley's and Col. Astor's Gasmobiles passed us about this time. We did not see the red car again, but Mr. Ripley's, I believe, had another stop that morning, apparently to look after ignition.

We rode through Amsterdam in a deluge of rain, and just beyond it we struck one of the worst pieces of road encountered on the run. It was deep mud, with a few stones somewhere at the bottom, and in the prevailing slipperiness we executed some interesting figures before we got through it. This was followed by hills and stone in profusion. Tribes Hill, five miles beyond Amsterdam, gave our engine a good test, and at its top were two bad bumps in quick succession. We had just passed these when the arm of the right steering knuckle broke at a weld, in the same spot where it had broken on Monday and been reformed. It was of nickel steel, but it had evidently been de-

fective to start with, and it was now out of business for good. Mr. Apperson, however, was equal to the situation, for he blocked up the front axle, produced a new steering knuckle from the tool space, and had the latter in place and the wheel on it in, I should say, not over fifteen minutes. While he was at work, Mr. Bishop, whom we had passed repairing a puncture about a dozen miles back, came along and offered help, which was declined with thanks. Several other machines passed us before we started again, and when we proceeded it was with a little more caution than before, since the new knuckle was not a forging, but an open-hearth casting (old style) and intrinsically much weaker.

We got into Fonda without further trouble and before the opening of the control. The rain had stopped for awhile and the sun was trying to shine, but with doubtful success. It was but a brief intermission, and, seeing black clouds still in the west, I offered my seat to a friend who didn't mind the rain, and went from Fonda to Herkimer by rail.

WEDNESDAY AFTERNOON: A RUN SHORT BUT ARDUOUS.

I had cause to congratulate myself on this move, for it rained heavily for an hour and a half just after the start, and at Herkimer, when the mud-besplashed, drenched and weary contestants dribbled in after their 38-mile struggle with greasy mire, the sole topic of conversation was the atrocious condition of the roads. Mr. George L. Weiss, who shared with Mr. J. W. Packard the task of keeping a 12-HP. Packard out of the ditch, declared that in all his 45,000 miles of automobile riding he had never found roads so slippery. More than once his skittish car had turned clear around with him and faced eastward again; and numerous other participants had similar experiences. The Appersons, with their nearly solid New York tires, were rather lucky in this regard, as from the small size (3 inches) and hardness of their tires the latter cut through the mud to solid bottom much better than the larger or softer tires of most of the other vehicles.

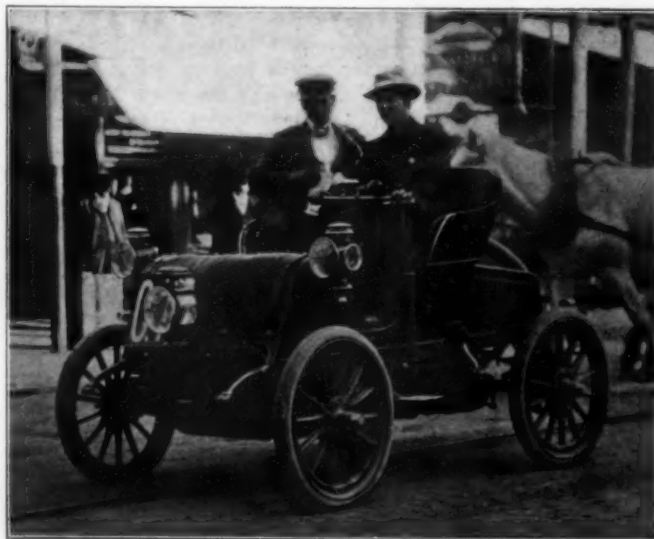
On account of the need for extreme caution, the contestants came in slowly. Mr. Bishop himself averaged only 15 miles an hour, coming in just as the control opened at 3:25. The next to arrive was Paul H. Denning in his White steamer, at 3:58, and the three other Whites followed immediately after. The Appersons came next, and after them McMurtry and Satterfield on Packards, the Robinson car, and Messrs. Weiss and Packard. The next arrivals were distributed between the Gasmobiles, Wintons, one of the Autocars, and the Foster, Lane, and Stearns steamers. Percy Owen came in shortly before 6 o'clock, driving McGregor's Winton. His rig had left the road somewhere and bent a steering knuckle.

Herkimer, though a small place, is a

most attractive one to look at, with neat residences, clean hotels, bright-looking stores, and one or two decent streets. We were not surprised, therefore, when the cordiality which we had met all along the route came to a climax here in a brass band serenade after supper and a speech of welcome by the mayor. After the latter had spoken, he introduced Mr. Shattuck and Mr. Scarritt, who talked entertainingly on good roads and the future of the automobile.

THURSDAY MORNING: THE WORST OF THE RUN.

The rain came down viciously Wednesday night, and the next morning it was still falling lightly. The worst of it seemed to be over, however, and I resumed my place. I was glad that I did, though from the standpoint of the pleasure-seeker there was little to recommend either that day's ride or the next. The roads out of Herkimer were sand and clay



ALEXANDER FISCHER IN HIS GASMOBILE.

sprinkled with stones, and the wheels tracked for long distances in the deep ruts. Reversing his tactics of the previous day, Mr. Apperson turned up late at the starting point, which gave him a well-rolled path for many miles, and contributed much to our comfort and a little, doubtless, to our speed, though we, like all the others, were far from wishing to hurry on those treacherous roads.

The adjustment of one of the cylinder oilers had been accidentally disturbed the night before, and, as it had not a sight feed, we stopped twice before it was reset to the proper point, this being judged by the behavior of the engine. No other stop was necessary, and that day, as on every other day of the run, the engine ran to perfection, never missing an explosion or betraying weakness.

We passed a Gasmobile, a Searchmont, and Mr. Field's motorette, and then, a few miles out, we came upon the big Holyoke just being pulled out of trouble by a

team of horses. It was on a high bank, skirting the railroad tracks, and one front wheel had gone over the edge, only a substantial board fence saving the other three from following. A quarter of a mile further we passed Mr. Satterfield's blue Packard with the rear axle broken off next to the left wheel. They were out of it, so it seemed, and we shouted our sympathy as we passed them. A little further we found Mr. Weiss and Mr. Packard in trouble, bereft of their right rear tire and proceeding very slowly on the rim. We learned later that they replaced the tire at Utica, and at the night control they were in good season.

We went through the grounds of Masonic Home, and then through Utica on a two-mile stretch of asphalt, over which, though the rain was steadily falling, we laid a straight course and stretched our legs, as it were, after our torturous crawling of the last dozen miles. I am afraid we made the eight-mile limit look pretty

cheap, but nobody seemed to care. Whatever attention our gait might otherwise have attracted seemed to be diverted to a couple of bouquets, which a Herkimer customer, delighted at the Appersons' early arrival the previous night, had tied on our lamps.

It was too good to last. New Hartford, four miles beyond Utica, deserves to be pilloried as having the worst roads between New York and Buffalo. To speak of their "surface" would be absurd, for

they had none. A foundation of cobblestone, dumped promiscuously and pressed by travel into ruts and bumps and hollows: on top several inches of clay mire, slippery as grease; on one side the ties and rails and stone heaps denoting a future trolley line, taking up half the road; on the other a sharp downward slope into pasture or truck garden or ditch. Luckily we encountered few vehicles in that enterprising village, for to turn out was beyond our power. It took the utmost efforts to keep in the road. We saw the tracks where one vehicle had unceremoniously gone down the bank and through a light fence. It had evidently scrambled back, however, as other tracks showed just beyond.

We left New Hartford, skidding from side to side in a fashion that would have appalled most drivers, but always contriving somehow to keep out of the ditch. We passed several vehicles, the drivers of none of them caring to match our pace;

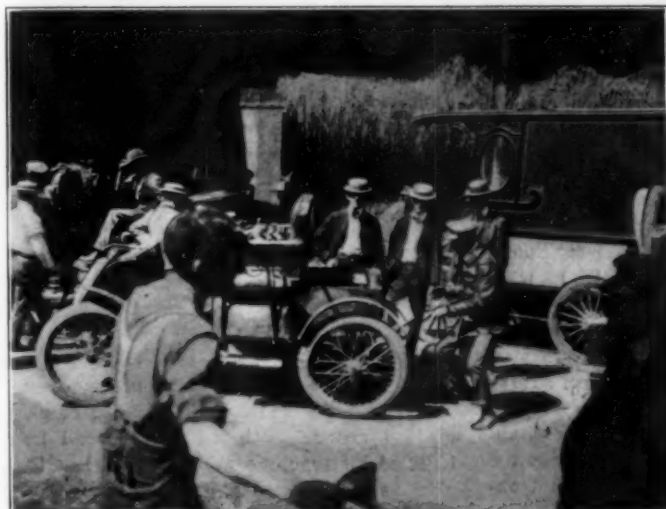


GETTING OUT OF TROUBLE.

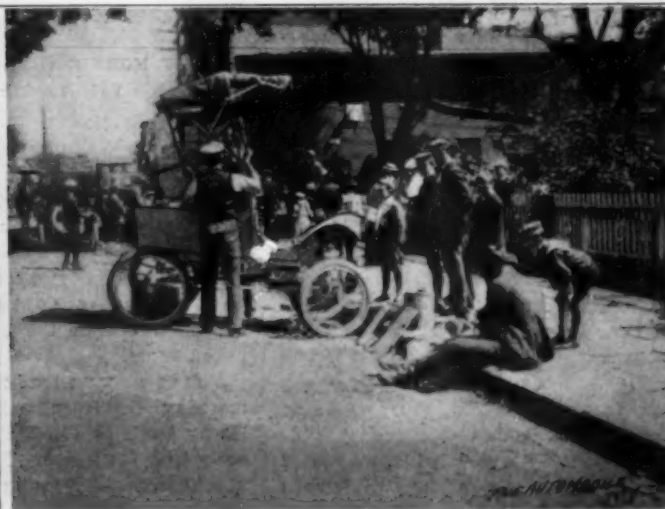


THE LOCOMOBILE REPAIR WAGON DOES WELL.

SNAPSHOTS ON NELSON HILL.



AT THE NOON CONTROL.



TWO PEEKSKILL VIEWS.

A WHITE STEAMER.



ON NELSON HILL: SKINNER'S RIG CLIMBS BEST BACKWARD.



THE ST. LOUIS CARRIAGE AT LYONS.

SEEN BY THE WAYSIDE.

and near Lairdsville I looked at my watch. Although we had been tempting Providence as it was, our speed that morning had averaged but eleven miles an hour, and if we were to show a twelve-mile average for the morning we must do the remaining eleven in three-quarters of an hour. Most men would have given it up, but not so Mr. Apperson. The road now, though slippery as ever in the still falling rain, was a little smoother than before, and my companion "cut out and ran." Perhaps he shook off some of that easy indifference which had seemed unruffled by any antics on his vehicle; perhaps the chauffeur, like Poor Jack, is looked after by some cherub up aloft; at all events, waltzing through the mud as if on skates, we got into Oneida with some eight minutes still to the good.

We were glad to afford our wet garments, which no storm clothes could wholly protect, a brief chance to dry; and still more glad when the clouds broke while we ate our lunch, and promised an end at last to the most dispiriting phase of our run.

THURSDAY AFTERNOON: SUNSHINE AT LAST.

As we hurried out of Oneida against a freshening west wind, I made my first acquaintance with a highway feature which we met frequently between Oneida and Rochester. Wherever the road had been macadamized, it was deeply scored with parallel ruts, from ten to twenty inches apart, over the whole width of the road. My companion usually tried to keep in them, holding the tiller loosely and letting the front wheels find their own path; but, traveling as fast as we were (we made that afternoon's stage, 26.8 miles, in 2 hours 2 minutes), we frequently jumped out of the ruts, and then the machine would slide in lively fashion before it dropped back again. Save for a few miles of good roads through Chittenango and Fayetteville and approaching Syracuse, the roads were mainly bad; but the rain had not been heavy in that section, and the roads were rapidly drying, so that we got along better than in the morning.

Except for our passing several machines, whose drivers showed no disposition to race, the afternoon's run was devoid of incident. When we struck the good roads which stretched out (oh, how short a ways!) from Syracuse, we "hit it up" for the first time that day, and went flying down the smooth asphalt of Genesee street at our best speed. There was a crowd again at Syracuse, which was reinforced by the local automobile club and made larger from the fact that some of the contestants had their home there. Mr. Van Wagoner, who drove C. R. Woodin's Century steam surrey, C. Arthur Benjamin, the Syracuse Locomobile agent, and H. Trebert, of the Stearns Steam Carriage Co., were received with hand-clapping. The general interest was reflected

in an illuminated "SYRACUSE BIDS YOU WELCOME" on the Town Hall.

As on previous days, experiences were the sole topic that evening. Forty-seven contestants had signed when the control closed, including, much to my surprise, Mr. Satterfield. He had found a new axle somewhere (Mr. Weiss explained that it was one which he [Weiss] had put "not far from there" for his own use in case of need), and turned up at the night control just before eight o'clock. The broken member, it proved, was one which had been bent and straightened before the run began. Mr. White, in the White runabout, was the last to sign. He had found the spoke heads pulling through one wheel rim, and had stopped to put washers under them and re-string the wheel. It ran noticeably out of true, however, during the rest of the trip. Perhaps the most notable absentee was McGregor's Winton, which had been run that day by H. L. Owesney, Percy Owen being unwell. It had skidded and gone across the ditch into a stone wall, wrecking a rear wheel.

FRIDAY MORNING: MAKING TIME AND TAKING CHANCES.

My recollections of the best hotel in Syracuse are not wholly cordial, for the reason that when at a late hour I opened my folding bed I found that the chambermaid had not troubled to change the sheets since it was last occupied. As my roommate was already asleep, I did what greater men have done under more trying conditions—made the best of things as I found them.

Just as we were ready to start on Friday morning, the Duryea three-wheeler, with Harry Burhans and Dr. Henry Power, appeared on the scene. They had spent the night at Oneida, owing to ignition troubles, and had started at half-past four that morning. I admired the doctor's fortitude, but he was modest on that point, and congratulated himself chiefly on being once more able to sit down to a square meal. He said that they had twice got into the ditch, but, the vehicle being light, they had had no trouble in getting it back.

We started at 8:34, and that morning Mr. Apperson seemed to forget altogether his caution of the day before. We encountered again, just out of Syracuse, wet macadam and deep parallel ruts, but this time we did not slow down until, after a vicious double slew which nearly took us into the ditch, we dropped sidewise into a rut with such force as to crack a spoke. We proceeded, after a momentary halt for inspection, but at a pace a little slower and with more careful steering.

My companion's prudence lasted as long as the ruts, which was perhaps three miles. We passed a Loco and a Stearns steamer, and then sighted Messrs. Packard and Weiss, the former driving. We went after them, and Mr. Packard opened his muffler. For a mile or more the chase

continued, up hill and down with little advantage to either side, and then we came to a patch of broken stone where Mr. Packard, no doubt, was afraid to endanger his tires. He drew aside and we waved him good-by, passing McMurtry at the same time. That was just before the long hill at Camillus, with its maximum upgrade of 17 per cent. Though as steep as Nelson Hill, its surface was a little better, and our slow gear took it without a hitch.

More hills followed, interspersed with roads by turns muddy and half-dry. We passed a dozen or thirteen other vehicles, including Col. Astor's and Percy Owen's, before we reached Port Byron. Throughout that day I alternated between dismay at my companion's recklessness and admiration of his skill. Again and again, as we skated from side to side through the treacherous slime, or charged slithering at a plank bridge over a gully or a brook, we seemed to escape disaster by a matter of inches. More than once I verily expected within a second or two to see our triumphant career end in a grand *debacle* to the tune of spitting spokes or a wrecked axle. But, though going at a rate that must have made those we passed think us daft, we never left the road. I think my surprise was sometimes as great as theirs; but I was getting used to it.

Some were not so fortunate. We passed the Robinson car, its four "Yellow K's" looking very neat in their russet automobile coats, feeling its way cautiously through deep mud. We learned that night that it had skidded into a field and been restored with difficulty.

Before we got into Weedsport we saw Benjamin in his Locomobile ahead of us. He did not relish being passed, and he handled his machine with such skill as to give us a long chase. We passed him finally, and then came to a stiff rise where our slow speed clutch would not take hold readily. We got up, but "Ben" had gone by us. We stopped to tighten the clutch, and then gave chase. We ran him out of steam after awhile, and then had to wait at a railroad crossing. Of course he got away from us the instant the gates went up, and we had to do it all over again. This time, however, we clinched our victory, and "A 47" was eighth behind us at Lyons.

Approaching Montezuma the roads are deep sand, and we were fortunate in going over them while they were damp and the ruts comparatively firm. We passed H. P. Maxim there, and then came to the Montezuma salt marsh. If we had gone off the road there (and we could easily have done so), all the King's horses would hardly have pulled us back again, and for once in a way Mr. Apperson took no chances. We got safely across, fretting just at the heels of the A. B. C. "Hydrocar," B 86, which we passed as soon as the road was wide enough.

A fine stretch of road followed, with nothing to hinder us, and we were soon

flying. Some farmers in an orchard by the road tossed us some peaches, which we dispatched with ease. From the tire tracks in the road, we knew that but two vehicles were ahead of us. The first was Bishop's and the second, a White, was passed near Clyde. That morning, at least, we had no more worlds to conquer.

It was the longest stage of the run, 48 miles, and though we tried to finish it before 12 o'clock, the roads beyond Lock Berlin were so bad that this was impossible. We got into Lyons at 12:03, or within 3½ hours of our start. Bishop had arrived at 11:21.

FRIDAY AFTERNOON: MORE HASTE, LESS SPEED.

The Erie canal, which our course had paralleled much of the way from Weedsport, was followed again out of Lyons. The air was clear, and the roads were for the most part a distinct improvement on what we had suffered over for the past two days. The Appersons started close together, just after half-past one, and Elmer led us for several miles.

Our springs had been designed for Indiana rather than New York roads, and a number of times each day we had struck hummocks or crosswalks with such speed as to bring the front axle up against the body with some force. There were a number of these crosswalks in Palmyra, and we hit them pretty hard. I was not surprised, therefore, when the spindle of the right steering knuckle (the casting) broke short off just as we were leaving that village, and let the axle end drop down, bumping and tearing, into the road. We were not thrown out, but we stopped in a hurry, and almost before we could get out there was a crowd around us.

Elmer had not seen the accident at first, but he soon came flying back to help us. Willing hands assisted to raise the front corner of the body and block up the axle, and the broken knuckle was then removed. Realizing his risk with the casting, Edgar had telegraphed for an extra one after the break on Tribes Hill, and this he now produced. It was quickly inserted and the wheel put on, and a careful inspection showed that the only other damage was a bend in one leaf of the spring. This, however, was not of such a character as to be dangerous, but it determined Edgar to put in the vertical kingbolt (which to my surprise I found had been out during the entire run) connecting the front axle and the underframe. It needed a little coaxing, for the alignment of the springs had suffered a bit, but it was soon in place and we were again ready to run. Our breakdown had cost just three-quarters of an hour.

In the first ten minutes several contestants whom we had lately passed came by, and some made friendly proffers of help, which we were able to decline. Elmer himself had waited only to see the axle blocked up and ascertain that no further help was needed.

When we tried to start again, the engine would run on the battery, but not on the magneto. The latter had shifted on its base, loosening the belt, and a jerk in the contrary direction remedied the trouble, for the afternoon at least.

We left Palmyra at a more decorous pace than we had entered it, and did no more scorching that day.

Through Macedon and Egypt the country was hilly, and the sandy roads had been washed by what must have been a veritable cloudburst. On the hills the whole surface was gone, leaving nothing but cobblestones, and the ditches had become ragged gullies, while in the valleys the sand carried down from above choked the watercourses and overflowed into the fields. We used the middle speed much of the time here, even on the level, and could seldom keep in the high gear for any length of time.

Beyond Egypt, however, the roads were better. We overtook a White steamer; I think near Pittsford, just as it stopped for water. The celerity with which its occupants performed that operation was an eye-opener for us. My companion, drawing up just behind them, halted for a drink, and they had filled the tank almost before he was out of the wagon.

A little further on we passed Owsesney, who had slipped his chain. Owsesney, who that day was driving Percy Owen's machine, was one of those who had offered us help at Palmyra, and when we rolled by him I think he was the most surprised man in Monroe county. I waved him a salute, but he was too dumfounded to respond.

It was possibly fortunate for us that our breakdown had occurred early in the afternoon, for in spite of the delay Mr. Apperson was able, by careful work, to push our average from Lyons up to ten miles an hour before Rochester was reached. We arrived at 5:09, and were fifteenth in line. Bishop was first, and then followed Messrs. Packard and Weiss, C. A. Benjamin, Elmer Apperson, W. A. Hatcher, G. B. Pettengill, a White steamer, H. P. Maxim, a Foster steamer and Mr. Otto's Gasmobile in the order named. Forty-one in all signed at the control, the last being Mr. Satterfield, whom we had passed in difficulty a short distance out of Lyons. He had trouble with his vaporizer, and finally came in on his low gear. One of those in hard luck was McMurtry. He had run lengthwise over a plank, and the end of the latter had tilted up and knocked the relief cock off his engine. He had spent an hour in getting it into shape to run, and as he had averaged only eleven miles on Thursday he was feeling rather blue.

I am quite convinced that, apart from any questions of tires, the relatively fast gait which both the Haynes-Apperson vehicles were able to maintain, over the slippery roads which prevailed for the better part of three days, was due in consid-

erable measure to the very efficient system of tiller steering with which these vehicles are equipped. Though bound to admit that on dry roads I think the wheel vastly superior, and to admit also that Mr. Apperson's vehicle, like others of its type, "wobbled" over most of the road when he did not take the trouble to keep it straight, still the regularity with which we, while skidding continuously, would go by wheel-steered vehicles of half again our power, could only be due to the fact that the drivers of the latter were afraid, as Mr. Apperson was not, to invite the first slip.

* * * * *

Friday night came the sad but not unforeseen tidings of President McKinley's death, and early the next morning everyone knew that that day's run was "off." Giving my seat to Secretary Butler, I rode unofficially into Buffalo on another machine, over delightful roads and amid clouds of gnats and winged ants that obscured the sky. May there be many more such runs, and may they be made under more propitious skies and have a less untimely end.

H. L. T.

A Show for Philadelphia.

Schlichter and Le Cato, who managed the automobile show in the Second Regiment Armory, Philadelphia, last year, announce that they will conduct a similar show next spring in the same place. The Armory has been enlarged and remodeled since last year, and there is every reason to suppose that the success of last year will be repeated. It was at first intended to hold the show this fall, but it was decided that the opening of the season would be a more popular time.

A Show in Chicago Next Spring.

Under the joint auspices of the Chicago Automobile Club and the N. A. A. M. an automobile show will be given in the Coliseum, Chicago, March 1 to 8, inclusive, 1902. This will be the first exhibition in which the Manufacturers' Association will be actively interested.

The show will be conducted on much the same lines as the Coliseum show last spring, and under the same manager, S. A. Miles. The Coliseum has been enlarged by the addition of an annex, 75 by 175 feet, and it has the space and facilities for a most successful show.

A Race Meet in Detroit.

Announcement is made of an automobile race meet to take place October 10th, at the one-mile track of the Detroit Driving Club, Detroit, Mich. This track is said to be both wide and well-banked, and much interest is being shown by Detroit people in the event. Cups to the value of \$1,000 will be given as prizes. William E. Metzger is chairman of the committee in charge.

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THE AUTOMOBILE.

Owing to the amount of space devoted to the endurance run in this issue, it was found necessary to defer the conclusion of Walter L. Bodman's interesting article on steam boilers till next month.

The Run and its Lessons.

Seventy-nine vehicles started from New York on Monday, September 9th, on the run to Buffalo. Of these, forty-one were officially reported at Rochester, where the run ended on account of President McKinley's death, and several others arrived there too late for the control. Had the run been made under normal touring conditions, waiting for dry roads and without forcing the machines beyond what they were intended to stand, it is wholly probable that sixty vehicles out of the seventy-nine would have got to Buffalo without any breakdown such as to keep them over a week on the road; and this, too, in spite of the fact that many of them were light runabouts never intended to go on such roads and grades at all. A glance over the list of starters shows nearly fifty vehicles, which, had the run been held twelve months ago, would or could not have entered, while it is safe to say that, if the remaining thirty had started, no more than a dozen or fifteen could have reached Buffalo. As an object lesson to the public, the run must be pronounced a most emphatic success.

To the manufacturers who risked costly vehicles on the altar of the cause, the run had naturally some lessons of its own. Perhaps the one which will be the most universally admitted is the vital importance of a long wheelbase where roads are rough and speeds are high. The gain in comfort alone (meaning the ability to stay in your seat without holding on) would be enough to settle the point; but to this we must add the fact that the short wheelbases still so much in vogue tax the operator severely to keep the vehicle on its course. Admittedly the mere weight of a long racer has much to do with its steadiness, but this is far from being the whole story. The shorter a vehicle is, all other conditions being equal, the more a given turn of the steering wheels, due to lost motion or rough surface, will deflect it, and the more it will pitch on a rough road, tend to jump out of the ruts, and rack and jolt itself generally. A short wheelbase is undoubtedly useful for quick work in traffic, but on the road it has no place; and this is one of many other reasons why the line should be sharply drawn between runabouts and tourists.

Putting Repairs on the Record.

It has been suggested for the conduct of future endurance runs that all repairs made at the controls, as well as those made on the road, be charged to the running time of the vehicles, in order to lessen the opportunity for makers of inferior

machines to obtain for them a factitious rating, based chiefly on the repair facilities they can muster. This is a much less impractical suggestion than the one referred to elsewhere, that repairs beyond some fixed amount should disqualify the vehicle, and if it could be carried out the result would certainly be beneficial, since it would compel all vehicles to travel at a speed proportioned to their resisting power, not for a day, but for the whole run. The speed would then be in reality, what it was intended to be in the recent run, an index of the quality of the machine.

The main difficulty with the plan, we anticipate, would be one of ways and means. It would involve separate stations at the night controls, one for repair work and one for storage, the day's run being regarded as finished when the vehicle was run into the latter, where, of course, no one but the official watchmen would be allowed to stay. In other words, the outlay for storage would be practically doubled. At the noon controls it is probable that a wholly new arrangement would be necessary, such, for example, as taking the time of incoming vehicles, and allowing the same interval to all alike for lunch, at the expiration of which the starting time would be taken whether the vehicle were ready or not.

One of the obvious defects of such a plan would be that time spent in cleaning, oiling, and refilling tanks would be indistinguishable from that spent in actual repairs, as it would be practically impossible to separate the two operations. Another would be that there is a large class of small repairs (such, for example, as most of the tinkering with ignition and vaporizer, or with clogged tubes or a burnt-out boiler), which has no connection with the speed at which a vehicle is run, and it will be entirely possible for a machine getting into trouble in this way to spend a lot of time *en panne* and then scorch to make up for it. However, the suggestion is worth thinking about, and we hope to see it discussed.

Narrow-Gauge Machines as Tourists.

While the endurance run can hardly be said to have "proved" anything with regard to the utility or otherwise of narrow-gauge machines for general touring, the operators of such vehicles of this character as were entered in the run can hardly have failed to come home with other than a strong conviction on this point. Over by far the larger portion of the run, the roads encountered were such that even moderately comfortable riding could be secured only by following the ruts; and vehicles which could follow the ruts only on one side were not only less pleasant to ride in, but were under the occasional necessity of abandoning the

ruts altogether, owing to the depth of the latter below the rest of the road.

The principal argument for a narrow gauge in a runabout appears to be that the standard gauge, 4 ft. 8 inches, is so wide as to necessitate considerable overhang between springs and wheels when the body is narrow. This may sometimes be reason enough, but it should be remembered that the roads on which the overhang is most undesirable are also those on which a narrower gauge than standard leads to the most trouble. Unless we are much at fault, the logical diagnosis indicates a stronger axle as the proper remedy.

Endurance and Repairs.

Although in most respects the management of the endurance run was accorded a well-earned praise, much criticism has been visited on that feature of it which made it possible for damaged parts to be repaired or replaced *ad lib.*, or to an extent limited only by the time available at the night controls. As the public could know little or nothing about this part of the affair, vehicles thus rejuvenated could be, and sometimes were, practically wrecked on the road, only to resume their course each morning, and at the finish claim as good an award as the vehicles which had needed nothing but cleaning.

The complaint is a just one, but the evil is perhaps more easily pointed out than cured. It was essential for the future that this first endurance run should go on record as a success; and, as success in such an affair is largely a matter of numbers, it would hardly have been politic for the committee to frighten away at the outset any considerable number of possible entries. But this would have been the inevitable result of even the most liberally-drawn regulation tending to disqualify vehicles on account of breakdown. No private tourist will own himself beaten so long as repair or replacement is still open to him, and no manufacturer can in reason be expected to feel otherwise. That the latter has better facilities makes his case different in degree rather than in kind, and the impracticability of making two classes—of private owners and manufacturers—and applying different treatment to them, should require no further proof than a glance over the list of entries, as they actually were.

In matters of this sort, much must be left to the intelligence of a wideawake public, and we are not without hope that a good proportion of the latter will refuse from the outset to believe that runabouts are fitted for cross-country touring in the company of phaetons of double their weight and one-third again their wheelbase. High grade material and scientific design will do much, but they will not per-

form miracles, and the line between runabouts and touring vehicles needs to be drawn as sharply in the mind of the public as it frequently was in the repair shops en route. We do not mean to say that most of the light vehicles were rebuilt between New York and Buffalo, or that none of the heavy machines were, but the distinction as to repairs needed held broadly true, or was most often modified by the lower average speed of the former; and this, of course, was only right, for a 1,000-lb. vehicle deserves fully as much credit for making a ten-mile average to Buffalo as a 2,000-lb. vehicle for a 15-mile average.

The Run and the Public.

The popular interest and good will manifested all along the route of the endurance run came as an agreeable surprise to those who had feared that the automobilists would be looked upon as high-handed invaders of the public's rights. So far, in most instances, was this from being the case that the hurrying chauffeurs were pelted with fruit and flowers, to say nothing of the cheers for their passage, volleys of questions at the controls, and cordial assistance wherever there was a breakdown. The event as a whole seemed to be regarded much as a circus parade would be, as a thing which would necessarily monopolize the road and perhaps frighten horses while it lasted, but which from the novelty and from the large number competing would be well worth the seeing and the temporary inconvenience.

How far the future, when the novelty has worn off while some of the inconvenience remains, can be predicted from this it is perhaps difficult to say. So far as we have heard, the actual mishaps were confined to one or two wagons broken by machines skidding into them, two or three runaway horses, a few dead dogs and a damaged bicycle, but with no loss to human life or limb. Unfortunately, the public is much in need of enlightenment on the skidding qualities of pneumatic tires, and the wet weather of three days caused a noticeable amount of friction between chauffeurs intent on a record and horse drivers indisposed to yield more than half the road. The imputation of being road hogs can hardly have failed to attach itself in frequent cases to the former.

The main problem, to educate the public concerning the automobile's manageability, and the horses to its harmlessness, is still to be solved. So far as noticed, the quadrupeds showed less uneasiness, as a rule, than the bipeds driving them; but the latter kind of panic, till cured, is almost worse than the other. Only familiarity can teach the lesson; and though the contest, so far as it went, was educational, it will take several seasons to complete the lesson.

Official Report Delayed.

The sudden termination of the endurance run at Rochester caused a certain amount of confusion in the timekeepers' arrangements for checking the records of the competing vehicles. Partly for this reason, and partly because of a decision on the part of the committee to make its official report fuller than at first proposed, the report has not yet been made public at the time this issue goes to press. It is announced that when published it will contain the time record of each vehicle for the stages in detail, as well as the general average for the run, to which it was at first intended to confine it.

We still have a number of reprints of the touring routes published in the July issue, which will be sent free of charge to anyone sending a stamp for postage. They are printed on good paper, on one side only, and include the following routes: New York to Albany, New York to Newburg and Fishkill, Albany to Buffalo, Philadelphia to New York, Philadelphia to Buffalo via Delaware Water Gap and Elmira, Cincinnati to Cleveland via Mansfield, Cincinnati to Cleveland via Columbus, Chicago to Cleveland, Cleveland to Buffalo, Indianapolis to Cleveland via Mansfield, and Pittsburg to Buffalo via Girard. Each route is given in detail, with distances from town to town and description of roads.

The Star Attraction Not There.

The withdrawal of W. K. Vanderbilt, Jr., from the list of starters, in order to save his famous "Red Rusher" for the Erie-Buffalo race, was a source of keen disappointment to the local sight-seers all along the way. At every control the first question was "Where's Vanderbilt?" and every white or red machine of more than runabout dimensions was identified at one time or another, with the "White Ghost" or its successor. Another personage much missed was Anna Held, that diverting young woman's press agent having started a rumor that she would enter the run with Fournier as her mechanician.

The Twentieth Century Sport.

A novel bull fight was lately tried in the Arena of Bayonne, France. M. Henry Deutsch, well known as president of the Aero Club, conceived the idea of mounting the picador on an automobile instead of a horse, thus doing away with the brutality of the conventional spectacle. The automobile, a 12-HP. Peugeot, was sheathed in iron to prevent the bull from catching his horns in it, but the precaution was hardly necessary, as the bull fled in panic from the machine and refused to face it.

The Contest at Nelson Hill.

Nelson Hill, three miles north of Peekskill, is locally the *pons asinorum* of the tourist awheel or en automobile. Being on the main road between Peekskill and Rhinebeck, it can hardly be avoided except by going west of the Hudson river, and its length, steepness, and poor surface combined make it extremely formidable. Its surface, measured from the brook at the bottom to the top, is 2,372 feet long, or nearly half a mile, and to this was added for a flying start, 542 feet of approach. The grade averages only ten per cent, but it has a maximum of nearly or quite 17 per cent at a point about half-way up, and this is approached by an increasing slope, which makes it impossible to "rush" it. In addition, the surface is sandy and stony, and would require a fair amount of power even on the level.

In the light or "A" class, the steam carriages in general made a very good showing, the times made by B. L. Wright and J. M. Page, in the Grout carriage and a Locomobile, respectively, comparing very creditably with that of Bishop's racing Panhard. The Duryea made an indifferent showing on its first trial, but being blocked, was allowed a retrial, when it took the hill in fine style, making the best time for a gasoline vehicle, next to Bishop's. Evidently seventeen per cent grades are not common in France, for two of the DeDions had to go up backward the steepness of the slope disturbing the gasoline level in the vaporizer, and all of them had to be pushed.

The steamers in class B were much slower on the hill, though in the case of the White carriages this was largely attributable to the flash boiler system used on them, by which they were unable, like the vehicles with shell boilers, to take advantage of steam stored up before the climb began. The Whites were delayed also by a block, and this, which would have given other steamers a chance to build up pressure, was a further disadvantage to them. They made the ascent with the passengers either pushing or working desperately at the auxiliary pump. The Victors also shed one or both occupants, and the Geneva and one of the Toledos stopped to raise steam.

The best climb in this class was made by William Morgan in an Autocar. A similar machine driven by Louis S. Clarke had to be pushed, apparently on account of the clutch slipping. The 8-HP. Winton, B 33, became stalled and had to be towed, and the St. Louis rig, which was rather overloaded by a third passenger, made the climb with some difficulty, by jumping the clutch in and out. It was not geared low enough for the hill. The other vehicles gave good accounts of themselves, though one Searchmont and the U. S. Long Distance machine were pushed.

In the heavy class, the Robinson car had to be towed, and the same was true of the Riker, though this was said to be due to the gasoline not getting into the vaporizer. Probably it was the same thing that bothered the DeDions. Mr. Shattuck's Panhard stopped for some reason, and had to be towed to the top. The Packards and the Gasmobiles all made the ascent well, the triple-cylinder motor of the latter seeming to give them a slight advantage over the former. The cup presented to the club by Mr. Shattuck, for the winner in Class C, was awarded to David Wolfe Bishop, whose



DAVID WOLFE BISHOP RUSHING NELSON HILL.
(Mr. Bishop is Looking Back.)

spectacular performance in his 30-HP. racing Panhard was the feature of the contest. Other cups were offered by Harlan W. Whipple and Winthrop E. Scarritt to the winners in Classes B and A respectively.

SUMMARY OF HILL-CLIMBING CONTEST.

Class A.		
No.	Make.	Elapsed time.
11.	White	7.02
36.	Locomobile	2.47
37.	Locomobile	4.10
38.	Locomobile	3.49
45.	Grout	2.45
47.	Locomobile	4.02
63.	Duryea	3.16
66.	Ward Leonard	10.40
72.	De Dion-Bouton	11.58
73.	De Dion-Bouton	4.59
75.	De Dion-Bouton	9.40
Class B.		
No.	Make.	Elapsed time.
4.	Haynes-Apperson	4.35
5.	Haynes-Apperson	5.41
12.	White	6.25
13.	White	8.15
14.	White	8.33
15.	Overman	7.29
16.	Overman	5.10
20.	Toledo	11.41
21.	Toledo	8.69

27.	Autocar	6.12
28.	Lane	5.0
32.	Winton	4.38
33.	Winton	29.41
34.	St. Louis	33.0
39.	Locomobile	3.55
40.	Locomobile	11.18
48.	Autocar	3.17
50.	Geneva	6.0
52.	Searchmont	6.06
54.	Stearns S. C. Co.	4.02
76.	Reading	10.25
78.	Columbia	5.31
80.	Columbia	5.45
81.	U. S. Long Distance	6.21
86.	Hydrocar	4.50

Class C.

No.	Make.	Elapsed time.
1.	Robinson	11.0
2.	Panhard	16.40
18.	Holyoke	7.0
30.	Gasmobile	8.45
31.	Gasmobile	6.22
29.	Gasmobile	14.42
55.	Panhard	2.13
56.	Packard	3.50
58.	Gasmobile	9.12
59.	Gasmobile	3.44
61.	Packard	6.20
65.	Century	5.50
77.	Gasmobile	6.02
79.	Packard	8.15

Notes Along the Way.

The withdrawal of Mr. William Morgan of the Autocar Co. is said to have been due to a broken axle, near Frankfort.

The 3-ton Toledo steam truck, the only vehicle entered of its kind, failed on a hill beyond Yonkers and gave up the contest.

A creditable performance was that of the Stearns steam carriage, B 54, which was generally not far from the leaders and seemed to need few repairs.

Mr. A. L. Riker, after replacing his springs at Albany, abandoned the run the next morning on account, it was stated, of trouble with the transmission gear.

The Grout steam runabout arrived at Rochester at 10:30 P. M., or too late for the control, but it went on to Buffalo the next day and was placed on view in the Grout Bros. space at the exposition.

The St. Louis carriage, driven by Mr. French, was not among the fast set—partly because it carried three instead of two—but it ran with great regularity, and was left almost untouched each night.

The wet weather caused a good deal of trouble with secondary circuits and spark plugs, it being impossible to prevent grounding or short-circuiting. The contact spark had here a notable advantage.

The promiscuous skidding of Wednesday and Thursday was hard on tires, several being torn off altogether. Among the unlucky drivers in this respect was W. A. Hatcher, C24, who lost both his rear tires at once from this cause.

List of Entries in the New York to Buffalo Endurance Contest.

Offi- cial No.	Class.	General description.	Name and address of manufacturer.	Entered by.	Operator and personal guest (if any).	No. of pas- sengers.	Motive power.	Weight, including equip- ment, etc.
1.	C	Touring car	Robinson Motor Vehicle Co., Hyde Park, Mass.	T. Robinson, Jr.	J. T. Robinson & J. T. Robinson, Jr.	4	Gasoline.	16
2.	C	Panhard-Levassor, Paris, France	Panhard-Levassor, Paris, France	A. R. Shattuck	A. R. Shattuck and J. Dunbar Wright	2	Gasoline.	12
3.	C	Knickerbocker, No. 10.	Ward Leonard Electric Co., Bronxville, N. Y.	Ward Leonard Electric Co.		3	Gasoline.	12
4.	B	2-p's g'r pleasure carriage	Haynes-Apperson Co., Kokomo, Ind.	Haynes-Apperson Co.	Edgar Apperson	2	Gasoline.	8
5.	B	2-p's g'r pleasure carriage	Haynes-Apperson Co., Kokomo, Ind.	Haynes-Apperson Co.	Edgar Apperson	2	Gasoline.	8
6.	D	Motor bicycle.	Stratton Motor Bicycle Co., 7 Wall St., New York.	Edmund F. Stratton		1	Gasoline.	1,910 lbs.
7.	D	Runabout.	The Geo. N. Pierce Co., Buffalo, N. Y.	Geo. N. Pierce Co.	D. Ferguson	1	Gasoline.	1,940 lbs.
8.	D	Runabout.	The Geo. N. Pierce Co., Buffalo, N. Y.	Geo. N. Pierce Co.	P. P. Pierce	1	Gasoline.	1,940 lbs.
9.	D	Motor bicycle.	E. R. Thomas Motor Co., Buffalo, N. Y.	E. R. Thomas Motor Co.	P. W. Sherman	1	Gasoline.	600 lbs.
10.	A	Gladiator-Volturnette.	Clement, Paris, France	R. P. Scott	R. P. Scott	3	Gasoline.	750 lbs.
11.	A	Runabout.	White Sewing Machine Co., Cleveland, O.	White Sewing Machine Co.	R. H. White	3	Gasoline.	1,995 lbs.
12.	B	Stanhope	White Sewing Machine Co., Cleveland, O.	White Sewing Machine Co.	O. S. Southworth	6	Gasoline.	1,350 lbs.
13.	B	Stanhope	White Sewing Machine Co., Cleveland, O.	White Sewing Machine Co.	M. Hughes	6	Gasoline.	1,350 lbs.
14.	B	Stanhope	White Sewing Machine Co., Cleveland, O.	White Sewing Machine Co.	P. H. Deming	6	Gasoline.	1,350 lbs.
15.	B	Stanhope	Overman Automobile Co., 81 Fulton St., New York.	Overman Automobile Co.	E. E. Degowin	6	Gasoline.	1,400 lbs.
16.	B	Runabout.	Baldwin Motor Wagon Co., Providence, R. I.	Baldwin Motor Wagon Co.	Mr. Baldwin	7	Gasoline.	1,270 lbs.
17.	E	Light delivery wagon.	Holyoke Automobile Co., Holyoke, Mass.	C. R. Greuter	C. R. Greuter	9	Gasoline.	2,620 lbs.
18.	C	Phaeton.	American Bicycle Co., Toledo, O.	American Bicycle Co.	A. W. Doe	20	Gasoline.	10,150 lbs.
19.	B	Three-ton steam truck.	American Bicycle Co., Toledo, O.	American Bicycle Co.	H. C. Lyle	6	Gasoline.	1,710 lbs.
20.	B	Stanhope.	Winton Motor Carriage Co., Cleveland, O.	Winton Motor Carriage Co.	Alexander Dow	12	Gasoline.	1,850 lbs.
21.	B	12-HP. semi-racing car.	Ohio Automobile Co., Warren, O.	Ohio Automobile Co.	J. W. Packard and G. L. Wells	12	Gasoline.	2,200 lbs.
22.	C	Packard, Model "C."	Winton Motor Carriage Co., Cleveland, O.	Winton Motor Carriage Co.	William Hatcher	12	Gasoline.	2,300 lbs.
23.	C	Packard, Model "C."	Winton Motor Carriage Co., Cleveland, O.	Winton Motor Carriage Co.	William Hatcher	12	Gasoline.	2,300 lbs.
24.	C	40-HP. racing car.	The Autocar Co., Ardmore, Pa.	Albert C. Bostwick	B. B. McGregor and A. C. Bostwick	8	Gasoline.	1,850 lbs.
25.	C	12-HP. semi-racing car.	Lane Motor Vehicle Co., New York.	Lane Motor Vehicle Co.	L. S. Clarke	8	Gasoline.	1,150 lbs.
26.	B	Autocar.	Automobile Co. of America, New York.	John H. Flagler	O. K. Raymond	9	Gasoline.	1,600 lbs.
27.	B	Four-passenger suvry.	Automobile Co. of America, New York.	Sidney Dillon Ripley	E. Higgins	9	Gasoline.	2,220 lbs.
28.	B	Phaeton.	Automobile Co. of America, New York.	Albert T. Otto	F. W. Walsh	12	Gasoline.	2,240 lbs.
29.	C	Phaeton.	Winton Motor Carriage Co., Cleveland, O.	Percy Owen	Percy Owen and H. L. Owens	12	Gasoline.	1,940 lbs.
30.	C	12-HP. semi-racing car.	Winton Motor Carriage Co., Cleveland, O.	H. Rogers Winthrop	H. R. Winthrop	8	Gasoline.	1,930 lbs.
31.	B	Phaeton.	St. Louis Motor Carriage Co., St. Louis, Mo.	St. Louis Motor Carriage Co.	J. L. French	7	Gasoline.	1,440 lbs.
32.	B	Gasoline carriage.	Foster Automobile Manufacturing Co., Rochester, N. Y.	Foster Automobile Mfg. Co.	Park Denmore	6	Gasoline.	1,350 lbs.
33.	B	Touring wagon.	Locomobile Co. of America, New York.	Locomobile Co. of America	J. A. Mitchell	3	Gasoline.	800 lbs.
34.	B	Runabout.	Locomobile Co. of America, New York.	Locomobile Co. of America	G. A. Knowles	3	Gasoline.	800 lbs.
35.	B	Runabout.	Locomobile Co. of America, New York.	Locomobile Co. of America	Thomas W. Clarke	4	Gasoline.	1,250 lbs.
36.	B	Large runabout No. 62.	Locomobile Co. of America, New York.	Locomobile Co. of America	S. T. Davis, Jr.	4	Gasoline.	1,250 lbs.
37.	A	Runabout.	Locomobile Co. of America, New York.	Locomobile Co. of America	W. F. Murphy	10	Gasoline.	1,900 lbs.
38.	B	Touring carriage.	Locomobile Co. of America, New York.	Locomobile Co. of America	Robert Dwyer	10	Gasoline.	2,430 lbs.
39.	B	Touring carriage.	Locomobile Co. of America, New York.	Locomobile Co. of America	William H. Browning	10	Gasoline.	2,430 lbs.
40.	B	Quick delivery.	Haynes-Apperson Co., Kokomo, Ind.	Haynes-Apperson Co.	H. K. Browning and wife	8	Gasoline.	2,400 lbs.
41.	E	4-p's g'r pleasure carriage	Grout Bros., Orange, Mass.	Grout Brothers	Charles Grout and B. L. Wright	3	Gasoline.	2,940 lbs.
42.	C	Dos-a-dos	Daimler Mfg. Co., Cannstatt, Germany	Wm. K. Vanderbilt, Jr.	C. A. Benjamin	35	Gasoline.	2,400 lbs.
43.	C	Open stanhope	Locomobile Co. of America, New York.	C. Arthur Morgan	William Morgan	8	Gasoline.	1,200 lbs.
44.	C	Open stanhope	The Autocar Co., Ardmore, Pa.	Dr. J. G. Lyman	W. B. Steen	12	Gasoline.	2,500 lbs.
45.	C	Open stanhope	Panhard-Levassor, Paris, France	Geneva Automobile & Mfg. Co.	E. B. Gallaher	12	Gasoline.	1,850 lbs.
46.	C	Open stanhope	Searchmont Motor Co., Philadelphia, Pa.	E. B. Gallaher	L. S. Chadwick	12	Gasoline.	1,850 lbs.
47.	C	Open stanhope	Searchmont Motor Co., Philadelphia, Pa.	E. B. Gallaher	L. S. Chadwick	12	Gasoline.	1,850 lbs.
48.	C	Open stanhope	Panhard-Levassor, Paris, France	Searns Steam Carriage Co.	H. Trebert and T. E. Griffin	12	Gasoline.	1,470 lbs.
49.	C	Open stanhope	Ohio Automobile Co., Warren, O.	David Wolfe Bishop	A. L. McMurry	14	Gasoline.	2,110 lbs.
50.	C	Open stanhope	Milwaukee Automobile Co., Milwaukee, Wis.	Milwaukee Automobile Co.	H. R. Taylor	2	Gasoline.	1,450 lbs.
51.	C	Open stanhope	Automobile Co. of America, New York.	John Jacob Astor	John Jacob Astor	2	Gasoline.	2,410 lbs.
52.	C	Open stanhope	Panhard-Levassor, Paris, France	Harlan W. Whipple	H. W. Whipple and W. E. Scarritt	9	Gasoline.	2,750 lbs.
53.	C	Open stanhope	The Autocar Co., Ardmore, Pa.	Herman B. Baruch, M.D.	John M. Satterfield	12	Gasoline.	2,150 lbs.
54.	C	Open stanhope	Duryea Power Co., Reading, Pa.	Chas. H. Metz	H. Burhans	8	Gasoline.	950 lbs.
55.	C	Open stanhope	Century Motor Vehicle Co., Syracuse, N. Y.	C. R. Woodin	C. H. Metz	2	Gasoline.	200 lbs.
56.	C	Open stanhope	Hendee Mfg. Co., Springfield, Mass.	Ward Leonard Electric Co.	C. E. Woodin and W. Van Wagoner	9	Gasoline.	2,100 lbs.
57.	C	Open stanhope	Electric Vehicle Co., New York, N. Y.	Hendee Mfg. Co.	C. G. Wrigley	5	Gasoline.	1,900 lbs.
58.	C	Open stanhope	Electric Vehicle Co., New York, N. Y.	Electric Vehicle Co.	O. Hedstrom	1	Gasoline.	1,820 lbs.
59.	C	Open stanhope	Foster Automobile Mfg. Co., Rochester, N. Y.	Foster Automobile Co.	E. H. Cox and P. Jerness	10	Gasoline.	2,050 lbs.
60.	C	Open stanhope	Winton Motor Carriage Co., Cleveland, O.	Alexander Winton	Mr. & Mrs. Ritter, R. Graves, & E. Adams	6	Gasoline.	1,350 lbs.
61.	C	Open stanhope	DeDion-Bouton Motorette Co., Brooklyn, N. Y.	DeDion-Bouton Motorette Co.	J. L. Leveque	4	Gasoline.	2,500 lbs.
62.	C	Open stanhope	DeDion-Bouton Motorette Co., Brooklyn, N. Y.	DeDion-Bouton Motorette Co.	C. H. Tanqueray	5	Gasoline.	930 lbs.
63.	C	Open stanhope	DeDion-Bouton Motorette Co., Brooklyn, N. Y.	DeDion-Bouton Motorette Co.	Kenneth A. Skinner	5	Gasoline.	880 lbs.
64.	C	Open stanhope	DeDion-Bouton Motorette Co., Brooklyn, N. Y.	DeDion-Bouton Motorette Co.	C. J. Field	5	Gasoline.	1,130 lbs.
65.	C	Open stanhope	DeDion-Bouton Motorette Co., Brooklyn, N. Y.	DeDion-Bouton Motorette Co.	J. Schermerhorn	5	Gasoline.	1,130 lbs.
66.	C	Open stanhope	DeDion-Bouton Motorette Co., Brooklyn, N. Y.	DeDion-Bouton Motorette Co.	Alexander Fischer	9	Gasoline.	2,330 lbs.
67.	C	Open stanhope	DeDion-Bouton Motorette Co., Brooklyn, N. Y.	DeDion-Bouton Motorette Co.	J. Sellman and H. P. Maxim	4	Gasoline.	1,840 lbs.
68.	C	Open stanhope	DeDion-Bouton Motorette Co., Brooklyn, N. Y.	DeDion-Bouton Motorette Co.	T. J. Martin & Elliott Evans	16	Gasoline.	2,850 lbs.
69.	C	Open stanhope	DeDion-Bouton Motorette Co., Brooklyn, N. Y.	DeDion-Bouton Motorette Co.	G. J. Pettengill	4	Gasoline.	1,730 lbs.
70.	C	Open stanhope	DeDion-Bouton Motorette Co., Brooklyn, N. Y.	DeDion-Bouton Motorette Co.	F. E. Lewis	7	Gasoline.	1,520 lbs.
71.	C	Open stanhope	DeDion-Bouton Motorette Co., Brooklyn, N. Y.	DeDion-Bouton Motorette Co.	F. H. Fowler	4	Gasoline.	850 lbs.
72.	C	Open stanhope	DeDion-Bouton Motorette Co., Brooklyn, N. Y.	DeDion-Bouton Motorette Co.	T. C. Curtis	6	Gasoline.	1,110 lbs.
73.	C	Open stanhope	DeDion-Bouton Motorette Co., Brooklyn, N. Y.	DeDion-Bouton Motorette Co.	M. H. Winters	1	Gasoline.	1,750 lbs.
74.	C	Open stanhope	DeDion-Bouton Motorette Co., Brooklyn, N. Y.	DeDion-Bouton Motorette Co.	J. H. Sager	1	Gasoline.	1,110 lbs.
75.	C	Open stanhope	DeDion-Bouton Motorette Co., Brooklyn, N. Y.	DeDion-Bouton Motorette Co.	Geo. D. Greene	1	Gasoline.	100 lbs.
76.	C	Open stanhope	DeDion-Bouton Motorette Co., Brooklyn, N. Y.	DeDion-Bouton Motorette Co.	W. L. Stoneburn	1	Gasoline.	110 lbs.

*Did not start. †Including driver.

Some European Transmission Gears.—II.

(Concluded from last month.)

The De Dietrich.

Horizontal engine in front of car, belts to fast and loose pulleys on shaft at rear, sliding gears to differential countershaft, bevel gears to two longitudinal side shafts, and bevel gears to rear driving wheels.

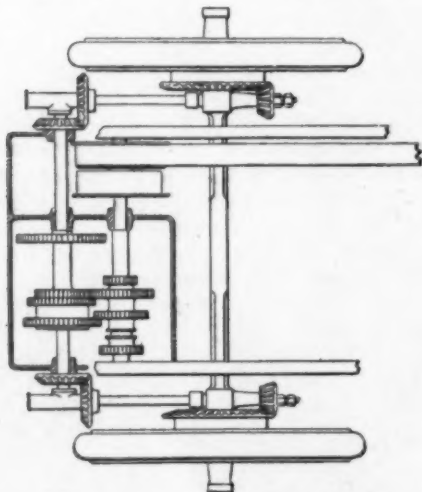


FIG. 4. THE DE DIETRICH SYSTEM.

Efficiency.—Combination of Benz and Panhard in first part of system. The drive to the wheels by four pairs of bevel gears is very radical, and has little to recommend it.

Adaptability.—Almost as handy as the Panhard.

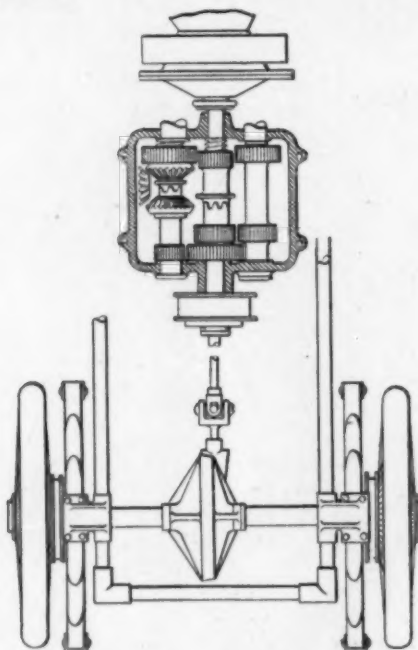


FIG. 5. THE RENAULT SYSTEM.

Simplicity.—One of the few systems more complicated than the Panhard.

Lightness.—The frame may be lighter than the Panhard on account of the belt drive.

Durability.—As the belt pulley may be very light, there is less shock in changing

speeds than with the Panhard. If chains instead of bevel gears were used on the wheels, this system might be considered very satisfactory.

Manipulation.—Somewhat easier with belt than clutch drive.

Cheapness.—Saving in belt drive offset by bevel gears.

The Renault.

Vertical engine in front of car, friction clutch in flywheel, longitudinal change gear, shaft with universal joints carrying bevel pinion which drives bevel gear on differential in live rear axle. The Darracq and several other small cars belong in this category.

Efficiency.—Comparable to Panhard, though possibly inferior on account of universal joints. Suitable only for light machines.

Adaptability.—A little better than Panhard, and neater.

Simplicity.—Chains dispensed with, but at the cost of a live rear axle.

Lightness.—Little to choose between this and Panhard.

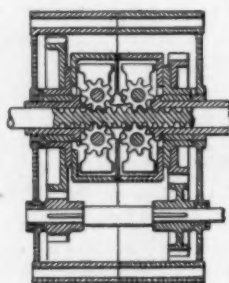
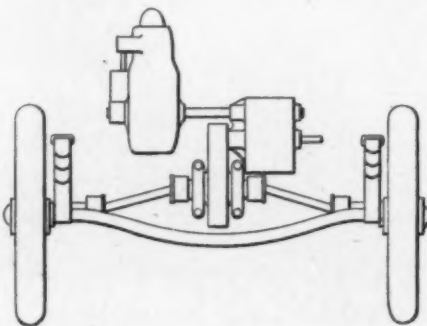


FIG. 6. THE DE DION SYSTEM.

Durability.—So far as principle goes, comparable to Panhard. The Renault machine in particular, however, has change of gears like the back gears of a lathe, being carried on quills which turn on shafts with eccentric bearings. The gears, therefore, come into mesh at the tips of the teeth instead of sidewise, which is about the worst possible arrangement. There is no flexible medium between motor and wheels, which of itself is prejudicial to durability.

Manipulation.—With the above arrangement, change of speed is rather more difficult than with the Panhard. Other points about equal.

Cheapness.—Slightly cheaper for small machines than Panhard system.

The De Dion.

Vertical engine at back of car, connected to special two-speed gear with individual clutches, and two shafts, one to each rear wheel, with universal joints.

Efficiency.—Transmission is very direct and should be correspondingly efficient. Clutches more practicable here than sliding gears on account of very high speed of motor shaft. Not being flexible, would hardly be a success with solid tires.

Adaptability.—Excellent with small machines, but the position of the motor would be very awkward with larger ones.

Simplicity.—Simple on account of there being only two speeds. Clutches rather difficult to get at. Rear wheels not well supported, but favored by the very small dead weight on them.

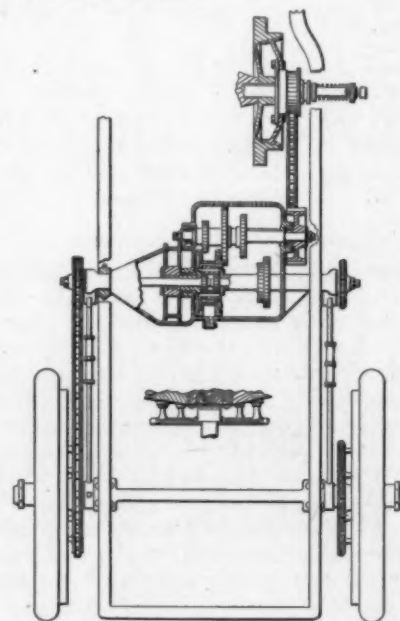


FIG. 7. THE WOLSELEY SYSTEM.

Lightness.—Weight is saved by high speed motor rather than by intrinsic lightness of system.

Durability.—Wear probably considerable, owing to high shaft speed and lack of a flexible medium between motor and wheels.

Manipulation.—Very simple, having only two speeds. Repairs probably more frequent than with belt or flexible drive.

Cheapness.—Not inherently cheap, but in small sizes the parts can be made in duplicate at small expense.

The Wolseley.

Horizontal engine in front, belt or clutch and chain to change speed gears, which engage countershaft with spur gear differential, and chain drive to both rear wheels.

Efficiency.—Rigidity of frame unnecessary, and with ball-bearings at all points there is very little loss.

Adaptability.—About equal to Panhard.

Simplicity.—About midway between Panhard and Benz, but with a range of three speeds and one reverse.

Lightness.—Frame may be very light,

and no second framework is needed to carry the engine and gear case. The belt drive, when used, is more elastic than the chain, and permits further lightening.

Durability.—With chain drive, about equal to Panhard. With belt drive the gears will last much longer.

Manipulation.—With chain drive, about equal to Panhard or Peugeot. With belt drive even a novice can operate the car successfully. The belt is only suitable for light cars. About equal to Panhard in case of repairs.

Cheapness.—About midway between Panhard and Benz.

The Madison Square Garden Show.

Arrangements are now complete for the automobile show at Madison Square Garden, New York, Nov. 2 to 9, under the auspices of the A. C. A. All the space on the main floor—which includes that last year devoted to the track—has already been taken, the balance being chiefly in the gallery, which, as last year, is devoted to accessories, parts, lamps, etc.

The show will open at 8 P. M., Saturday, Nov. 2, and will be open daily, except Sunday, from 10 A. M. to 11 P. M. till its close. Following is a list of the concerns which have engaged space to date:

The Porter Battery Co.; Electric Equipment Co.; Mobile Co. of America; Winton Motor Carriage Co.; Electric Vehicle Co.; Baker Motor Vehicle Co.; Peerless Mfg. Co.; Locomobile Co. of America; Autocar Company; Automobile Co. of America; Overman Automobile Co.; Woods Motor Vehicle Co.; Haynes-Apperson Co.; American Bicycle Co.; De Dion-Bouton Motor-ette Co.; The George N. Pierce Co.; Pan-American Motor Co.; U. S. Long Distance Auto. Co.; Knox Automobile Co.; Geneva Automobile & Mfg. Co.; Automotor Co.; Desberson Motor Car Co.; Ohio Automobile Co.; D. B. Smith Co.; Duryea Power Co.; Steamobile Co. of America; Foster Automobile Co.; Lane Motor Vehicle Co.; Loomis Automobile Co.; Remington Automobile & Motor Co.; Robinson Motor Co.; Crest Mfg. Co.; Upton Machine Co.; Diamond Rubber Co.; Jos. Dixon Crucible Co.; Charles E. Miller; Janney, Steinmetz Co.; Dow Portable Elec. Asst. Co.; N. Y. Belting & Packing Co.; Gleason-Peters Air Pump Co.; Midgley Mfg. Co.; American Ball Bearing Co.; John Simmons Co.; Rose Mfg. Co.; Munger Vehicle Tire Co.; Gray & Davis; B. F. Goodrich Co.; Veeder Mfg. Co.; Auto. Supply Co.; American Roller Bearing Co.; Baldwin Cycle Chain Co.; Consolidated Rubber Tire Co.; Metallic Rubber Tire Co.; Badger Brass Mfg. Co.; Hartford Rubber Works Co.; Ward Leonard Electric Co.; Century Motor Vehicle Co.; R. E. Dietz Co.; Shelby Steel Tube Co.

The Joliet Driving Club announces a race meet at Joliet, Ill., Oct. 18-19. A road race from Chicago to Joliet is on the program.

CLUB NEWS AND VIEWS

Club Directory.

Automobile Club of America, S. M. Butler, Acting Secy., 753 Fifth Ave., New York City.

Automobile Club of Baltimore, W. W. Donaldson, Secy., 572 Park Ave., Baltimore.

Automobile Club of Bridgeport, F. W. Bolande, Secy., 49 Cannon St., Bridgeport, Conn.

Automobile Club of Brooklyn, C. Benton Dix, Secy., Hotel Clarendon, Brooklyn, N. Y.

Automobile Club of California, R. R. l'Hommedieu, Secy., San Francisco, Cal.

Automobile Club of Cincinnati, R. H. Cox, Secy., Cincinnati, O.

Automobile Club of Columbus, C. M. Chittenden, Sec., Broad St., Columbus, O.

Automobile Club of Maine, Henry M. Jones, Secy., Portland, Me.

Automobile Club of New England, Geo. E. McQueston, Secy., Brookline, Mass.

Automobile Club of Rochester, Fredk. Sager, Secy., 66 East Ave., Rochester, N. Y.

Automobile Club of Syracuse, Frederick N. Elliott, Secy., 515 S. A. & K. Building, Syracuse, N. Y.

Bloomsburg Automobile Club, C. W. Funston, Secy., Bloomsburg, Pa.

Buffalo Automobile Club, Ellicott Evans, Secy., Lenox Hotel, Buffalo, N. Y.

Chicago Automobile Club, H. M. Brinckerhoff, Secy., Monadnock Block, Chicago.

Cleveland Automobile Club, Windsor T. White, Secy., Cleveland, O.

Columbia College Automobile Club, Lewis Iselin, Secy., Col. College, New York.

Dayton Automobile Club, E. Frank Platt, Secy., Dayton, O.

Herkimer Automobile Club, W. I. Taber, Cor. Secy., Herkimer, N. Y.

Hudson County Automobile Club, F. Eveland, Secy., Jersey City, N. J.

Indiana Automobile Club, August Habich, Secy., Indianapolis.

Long Island Automobile Club, C. W. Spurr, Jr., Secy., 1190 Fulton St., Brooklyn, N. Y.

Massachusetts Automobile Club, L. E. Knott, Secy., Ashburton Pl., Boston.

New Bedford Automobile Club, E. G. Watson, Secy., New Bedford, Mass.

New Jersey Automobile Club, Dr. H. Power, Secy., Upper Montclair, N. J.

North Jersey Automobile Club, E. T. Bell, Jr., Secy., Paterson, N. J.

Philadelphia Automobile Club, Frank C. Lewin, Secy., Hotel Flanders, Phila., Pa.

Pennsylvania Automobile Club, H. J. Johnson, Secy., 138 N. Broad St., Philadelphia.

Rhode Island Automobile Club, F. A. Fletcher, Secy., 42 So. Water St., Providence.

San Francisco Automobile Club, B. L. Ryder, Secy., San Francisco, Cal.

St. Louis Automobile Club, John Ring, Secy., St. Louis, Mo.

Troy Automobile Club, J. S. Thiel, Secy., Troy, N. Y.

Worcester Automobile Club, H. E. Sheldland, Secy., Worcester, Mass.

Rhode Island Automobile Club.

The Rhode Island Automobile Club will hold a race meet, October 17, at Narragansett Park, for which a sanction has been received from the A. C. A. Efforts will be made to secure the presence of some of the most prominent amateurs and racing men now in the country, including a large Newport contingent.

There will be four classes, one each for electric, gasoline and steam, and a championship race for carriages over twelve horse power. The trophies will consist of nine valuable silver cups, aggregating \$1,200 in value. There will be two prizes for each of the three classes, a first and second, and a \$500 cup for the big carriages. The latter trophy is given by the club, and the others are donated by club members.

Automobile Club of Rochester.

The following have been elected officers of the Automobile Club of Rochester, for the ensuing year: President, George Eastman; vice-president, James S. Watson; secretary and treasurer, Frederick Sager. The new board of governors is composed of F. H. Bettys, J. J. Mandery, and F. E. Mason.

Reliability Trial of the A. C. G. B. and I.

A five-day "Trial of Reliability" was held by the Automobile Club of Great Britain and Ireland during the first week of September. It consisted in the main of daily runs, of from 96 to 116 miles, from Glasgow to neighboring cities, returning each day to the starting point.

On the Saturday before the trials a series of backward and forward brake tests was held, by which to insure the fitness of the vehicles for the severe hill work of the runs themselves. The backward test consisted first of a test for holding power on a 14 per cent. grade, after which the clutch was disconnected and the brake released, allowing the vehicle to run backward. At the end of 30 feet the brake was applied and the distance required for pulling up was measured. The latter was in very few cases found to exceed two or three lengths. The forward test was practically similar, and all machines but one went through both tests very well.

In connection with the runs a minimum time was allowed for each stage, disqualification being the penalty for going under it, and the maximum limit was made very liberal.

Correspondence.

Space will be given on this page to letters concerning the Automobile, its operation or construction, to accounts of tours or runs, routes of travel, good roads, etc. When requested by correspondents their names will not be published, but must always be given in the communication to the Editor.

A Steam Carriage Protest.

Editor THE AUTOMOBILE:

The best time recorded on Nelson Hill in Class A was 2 mins. 45 secs., by Messrs. Grout Bros. in a runabout carrying a 16-inch boiler. A "Locomobile" came second and another "Locomobile" third. No. A36, a style No. 2 "Locomobile" containing a 14-inch boiler and driven by J. Murray Page, was 2 secs. behind the best time. The "Locomobile" should have been entitled to the first place, as the vehicle was delayed on the hill and caused to stop, the road being blocked by a gasoline carriage. From 20 to 40 secs. was lost by this delay.

A formal protest has been handed to the committee, which has not yet been acted on.

The "Locomobile" Company of America.
by J. A. Kingman.

New York, Sept. 10.

Paying for Special Roads.

Editor THE AUTOMOBILE:

When I looked at your editorial remarks in the September number of THE AUTOMOBILE, it occurred to me that you would be interested to have the following extract from a paper which I had prepared to be read at the International Good Roads Congress at Buffalo, this week:

"The existence of turnpikes down to the time when railroads attracted almost all through traffic has obscured the injustice resulting from the present system of highway management to persons who happen to live along the line of through roads, market roads or highways joining thickly settled places. The turnpikes came into existence as a means of economy of cost to the community by throwing the burden upon those who use the roads, and can only be regarded in the light of history as so many proofs of the inadequacy of the highway system of the early part of the last century. As most of that system is still in operation, a return to some kind of toll road may be confidently predicted unless there are speedily made such changes in the highway laws as will afford the kind of roads required by the new long distance traffic. The bicycle side path has arisen in this way; and the construction of automobile roads, from which slow traffic would be excluded, could easily follow in the sparsely settled country regions."

In connection with this extract, I will suggest that a beginning of a special automobile road system could easily be made from Lakewood through the pines to the road from Philadelphia to Atlantic City. The experiment could there be

tried with every chance of success possible as the country is sparsely settled and the land of small value.

John Bethell Uhle.

The Highway Alliance, 206 Broadway,
New York, Sept. 16.

Things Seen and Heard.

A number of contestants tried the rope expedient to keep their tires from slipping, but the ropes cut through very rapidly and soon had to be taken off. The most nearly satisfactory thing was an affair of leather straps, used by Dr. Truman J. Martin.

The efforts of Bradford McGregor to catch Mr. Bishop, on Monday and Tuesday, were such as to call forth objections from the committee, which exacted of the former a promise not to try to pass Bishop unless himself in danger of being passed by a third competitor.

The only lady to finish the run was Mrs. W. H. Browning, who accompanied her husband in his Haynes-Apperson surrey. On Friday they were greatly delayed by bad gasoline, which lent support to an absurd advance rumor that the vehicle had exploded and Mrs. Browning been thrown out and killed.

The vehicles in which Elmer and Edgar Apperson made the New York to Buffalo endurance run were driven by them from Kokomo, Ind., to New York, a distance of 1,050 miles, just before the run in 73 hours running time. They are standard Haynes-Apperson phaetons, and are now on view at the Pan-American Exposition.

The successful completion of the run by the Pierce runabouts and the Knox three-wheeler was a surprise to many. One of the former struck a hole at Utica and turned over, and the Knox vehicle received some rough usage, but all arrived safely. The Knox, it is claimed, required no repairs except to straighten a valve rod and replace a bolt through the left spring. The body, however, was rather used up in an overturn.

Among those on whom the premature termination of the run fell rather heavily was H. P. Maxim. Mr. Maxim, who is now with the Westinghouse Machine Co., Pittsburgh, left his work there to pilot Jefferson Seligman's Columbia through the run. He had figured his average up to Rochester as 11.85 miles per hour, and was counting on bringing himself into the first class on the last day's run.

There was some talk at Rochester of continuing the run to Buffalo with the numbers removed from the vehicles; but it was found that this could not be done without passing the Milburn house, where the dead President's body lay, and in view

of the inevitable public stir the idea was abandoned. Awards were consequently made on the basis of the speeds made up to Rochester.

The Holyoke phaeton, driven by C. R. Greuter, struck a rock before reaching Poughkeepsie, and broke the front axle. The break was in such a place that the axle was held together by the truss rod, and the fracture was not noticed till the vehicle was near Rhinebeck the next morning. As none of the local blacksmiths could undertake the job, the vehicle was run on to the Rhinebeck steamboat and brought to Albany, where a stiffener was bolted to the axle. It finished the run to Buffalo without further trouble.

Suit Against the Electric Vehicle Co.

Suit has been brought by Richard Siegman, of New York, representing a number of minority stockholders of the Electric Vehicle Co., against the principal majority stockholders of the same company, alleging that the company has been mismanaged, and asking the Chancery Court of Trenton, N. J., in which the suit is brought, to investigate its financial affairs, notably the manner in which dividends have been declared and the great increase in capital stock since the company was organized. Complaint is made, among other things, that the Siemens & Halske plant, Chicago, was purchased at an excessive figure and afterwards sold at a loss; that when the Riker Electric Vehicle Co. was absorbed the number of directors was increased without the knowledge or consent of the minority stockholders, and that the latter have been generally ignored and their interests sacrificed.

More Trouble at Newport.

The motorphobes of Newport, R. I., not content with their success in preventing the races on Ocean Drive, have persuaded the Police Commissioners to place three special policemen on that street, with authority to arrest any automobilist who exceeds the ten-mile legal limit of speed. A mile will be measured off and the chauffeurs timed as they go over it.

Records at Fort Erie.

In the automobile races held at the Fort Erie track Sept. 26th, the two-mile race between open steam carriages of 2 3-4 HP. was won by C. A. Benjamin with a Locomobile, while J. T. Jones was second and H. F. Boutelle third, also with Locomobiles.

W. K. Vanderbilt, Jr., has sold the noted "White Ghost" Daimler to E. R. Thomas, of the banking firm of R. Thomas & Son, New York. The "White Ghost" has been in Mr. Vanderbilt's possession since the spring of last year.

Arrivals at Rochester September 13, 1901.

Control opened at 3.45 p. m., closed 10.30 p. m.

Order	Time of Day	Class and Number	Operator	Make of Vehicle
1.	3.45	C 55	D. W. Bishop	Panhard
2.	4.07	C 23	J. W. Packard	Packard
3.	4.15	A 47	C. A. Benjamin	Locomobile
4.	4.20	B 5	Elmer Apperson	Haynes-Apperson
5.	4.32	C 24	William Hatcher	Packard
6.	4.46	B 80	E. B. Pettengill	Columbia
7.	4.47	B 12	O. S. Southworth	White
8.	4.53	B 78	H. P. Maxim	Columbia
9.	4.59	B 70	F. R. Denmore	Foster
10.	4.59	C 31	Albert T. Otto	Gasmobile
11.	5.01	B 35	S. D. Waldron	Foster
12.	5.04	B 13	M. Hughes	White
13.	5.08	B 86	M. H. Winters	Hydrocar
14.	5.09	A 11	R. H. White	White
15.	5.09	B 4	Edgar Apperson	Haynes-Apperson
16.	5.17	B 28	O. K. Raymond	Lane
17.	5.20	C 2	A. B. Shattuck	Panhard
18.	5.23	B 32	H. L. Owsney	Winton
19.	5.24	C 77	Alexander Fischer	Gasmobile
20.	5.30	B 14	F. H. Deming	White
21.	5.31	C 79	Dr. T. J. Martin	Packard
22.	5.50	A 37	J. A. Mitchell	Locomobile
23.	5.51	A 72	J. Louvigne	De Dion
24.	6.05	A 8	P. P. Pierce	Pierce
25.	6.22	C 1	J. T. Robinson	Robinson
26.	6.30	C 30	S. D. Ripley	Gasmobile
27.	6.36	B 34	J. L. French	St. Louis
28.	7.08	B 81	F. E. Lewis	U. S. Long Distance
29.	7.29	C 65	C. B. Woodin	Century
30.	7.34	A 82	F. H. Fowler	Knox
31.	7.37	A 75	C. J. Field	De Dion
32.	7.47	A 63	H. Burhans	Duryea
33.	7.48	A 38	G. A. Knowles	Locomobile
34.	7.54	C 56	A. L. McMurtry	Packard
35.	8.24	C 18	C. R. Greuter	Holyoke
36.	8.45	C 59	W. H. Owen	Gasmobile
37.	9.16	B 27	L. S. Clarke	Autocar
38.	9.19	B 22	Alexander Dow	Winton
39.	9.25	B 20	H. Curtis	Toledo
40.	9.39	B 39	J. W. Clark	Locomobile
41.	9.45	C 61	J. M. Satterfield	Packard

The Official Automobile Blue Book Out.

A copy of the Eastern Edition of the Official Automobile Blue Book, announced in our July issue, has just been received from the publishers. It is accompanied by four maps, each 22 inches square, which show all the roads within a radius of 50 miles, more or less, of Boston, New York, Philadelphia and Washington, respectively. The good roads are in heavy black lines, the "fair" roads dotted and all others in light lines. The railroads and streams are also shown, but the latter are not always named.

The book itself contains brief outlines of touring routes radiating from the four cities mentioned, and lists of repair stations, the latter being classified according to their facilities. Distances are also given, and the character of the roads noted. Much other convenient information is added likewise, such as a list of hotels, a telegraph code for advance communication to hotels and repair stations, various state and local ordinances, and useful tables of mechanical data. About 300 repair and supply stations are enumerated, and the publishers expect to announce others in subsequent editions, which are to be published every six months.

It is noticeable in several cases that the touring routes given in the book follow the shortest rather than the best roads. For example, the tourist from New York to Philadelphia is invited to go over the unspeakable road from Jersey City to Newark, and then by the old cycle route, via Princeton and the "Rocky Hill road," instead of by the new route via Staten Island, Hightstown and Mt. Holly, which was published in THE AUTOMOBILE last July, and which follows good roads all the way. The latter route, however, may readily be traced on the maps.

The book is published by the Official Automobile Blue Book Co., 22 Burling Slip, New York, and is sold by subscription only, at \$5 annually.

Thomas Bicycle Motors for the Trade.

An announcement of interest to bicycle manufacturers is that of the organization of the Auto-Bi Company, of Buffalo, which has taken over the motorcycle manufacturing end of the E. R. Thomas Motor Co.'s business. The latter company will confine itself henceforth to manufacturing the motor equipment, which it will

sell not only to the Auto-Bi Co., but to the trade at large as well. This move places an air-cooled motor of established reputation within the reach of every one wishing to build motor bicycles or tricycles on a small scale.

The E. R. Thomas Co.'s line includes powers from 1½ to 5 HP., in single-cylinder air-cooled and water-jacketed motors, and twin-cylinder water-jacketed motors of 7 and 10 HP. for automobiles and launches.

Crest Mfg. Co. to Make Spark Coils.

The Crest Mfg. Co., Cambridgeport, Mass., is now putting on the market a line of jump spark coils of their own manufacture. These include a round coil encased in hard rubber for motor bicycles and boxed-in coils for one and two-cylinder motors. These coils are all alike, in that the battery wire is used to ground both the primary and secondary coils. They are designed for single-spark interrupters, no vibrator being used.

Patents.

List of Automobile patents granted during month of September.

681,576—Motor carriage. Issued to A. S. Parsons.
 681,219, 681,220—Motor vehicle. Issued to B. C. Hicks.
 681,721—Automobile driving gear. Issued to S. D. Mott.
 681,769—Motor vehicle. Issued to J. C. Wood.
 682,211—Carbureter. Issued to E. B. Ludwig.
 682,509—Carbureter. Issued to W. O. Vance.
 682,286—Vapor generator and burner. Issued to F. B. Shafer.
 682,262—Steam vehicle for common roads. Issued to J. H. Mann.
 682,194—Steam propelled vehicle. Issued to H. K. Hess.
 682,775—Automobile. Issued to M. A. Yeakley.
 682,682—Motor bicycle. Issued to E. F. Hafelinger.
 682,853—Carbureter. Issued to J. W. Kitten.
 682,596—Carbureting device for explosive engines. Issued to R. & W. T. Aldrich.
 682,905—Explosive engine evaporizer. Issued to J. C. Bland, Jr.
 682,854—Sparkigniter for explosive engines. Issued to W. C. Matthias.
 682,606—Explosive engine for motor vehicles. Issued to C. E. Duryea.
 682,629—Hydrocarbon burner. Issued to E. G. Mummery.
 682,933—Incandescent igniter for explosive motors. Issued to R. P. Hansen.
 682,977—Resilient or elastic tire. Issued to E. A. Dibbens.
 682,983—Motor vehicle. Issued to H. A. Frantz.
 682,642—Means for controlling electric motor vehicles. Issued to J. Sachs.

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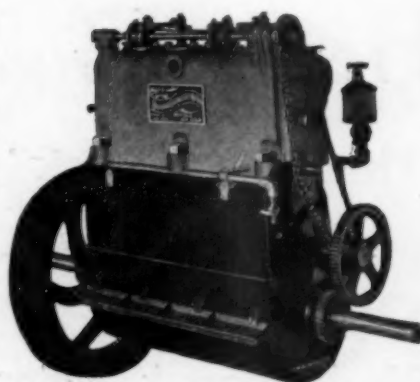
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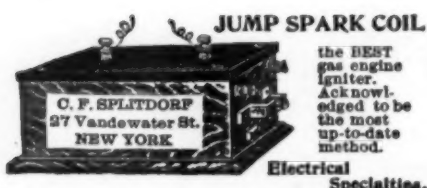
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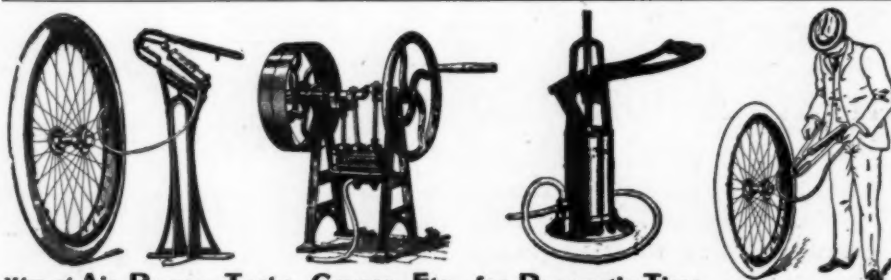
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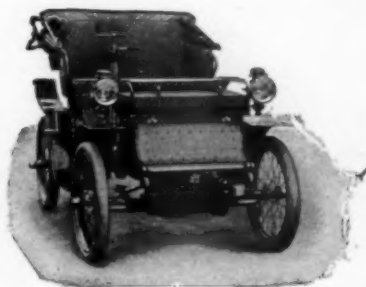
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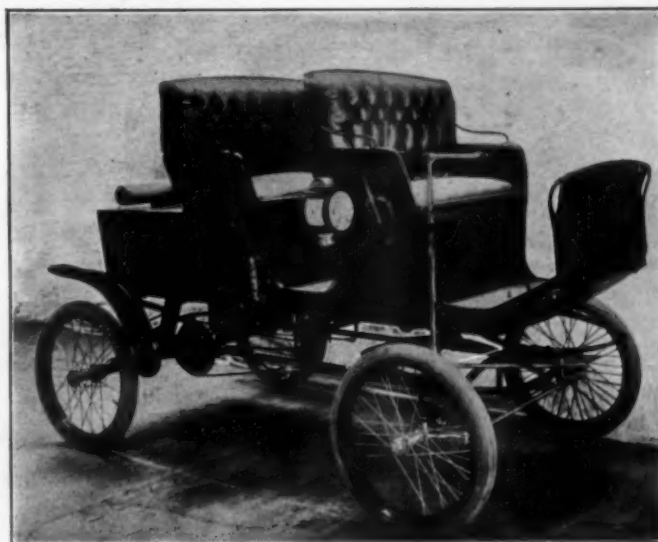
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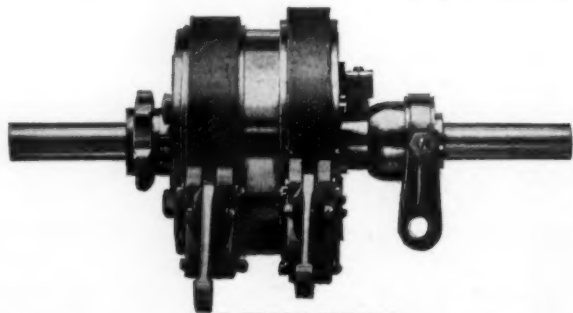
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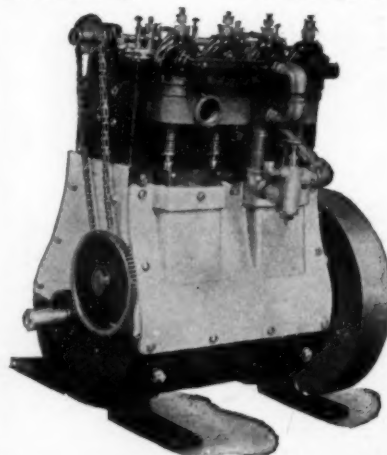
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Locomobile Branch, Buffalo — Showing the six regular model Locomobiles entered in the test. The third Locomobile from the left finished third, being preceded by two machines of greatly superior power. It had only $3\frac{1}{2}$ HP., and was driven by Mr. Benjamin of Syracuse. It was the first steam carriage to finish. All of the six runabouts came through in an excellent manner.

Second Annual

FRANK W. SANGER,
Manager.

AUTOMOBILE SHOW

Madison Square Garden
New York City

November 2d to 9th
1901

List of Exhibitors to Date

Mobile Co. of America,
Electric Vehicle Company,
Peerless Manufacturing Company,
Autocar Company,
Overman Automobile Company,
Haynes-Apperson Company,
De Dion-Bouton Motorette Co.,
Pan-American Motor Company,
Knox Automobile Company,
Automotor Company,
Century Motor Vehicle Company,
Ohio Automobile Company,
Duryea Power Company,
Foster Automobile Mfg. Company,
Locomis Automobile Company,
Vehicle Equipment Company,
Crest Manufacturing Company,
Diamond Rubber Company,
Charles E. Miller,
Dow Portable Elec. Assistant Co.,
Gleason-Peters Air Pump Company,
R. E. Dietz Company,

John Simmons Company,
Rose Manufacturing Company,
Gray & Davis,
Veeder Manufacturing Company,
American Roller Bearing Company,
Consolidated Rubber Tire Company,
Metallic Rubber Tire Company,
Winton Motor Carriage Co.,
Baker Motor Vehicle Company,
Locomobile Co. of America,
Automobile Co. of America,
American Bicycle Company,
The George N. Pierce Company,
U. S. Long Distance Automobile Co.,
Geneva Automobile & Mfg. Co.,
Desberson Motor Car Company,
Ward Leonard Electric Company,
D. B. Smith & Company,
Steamobile Co. of America,
Lane Motor Vehicle Company,
Remington Automobile & Motor Co.,
Robinson Motor Vehicle Company,

Upton Machine Company,
Joseph Dixon Crucible Company,
Janney, Steinmetz & Co.,
N. Y. Belting & Packing Co.,
Midgley Manufacturing Co.,
American Ball Bearing Company,
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Munger Vehicle Tire Company,
B. F. Goodrich Company,
Auto Supply Company,
Edwin Cycle Chain Company,
Porter Battery Company,
Badger Brass Manufacturing Co.,
Hartford Rubber Works Company,
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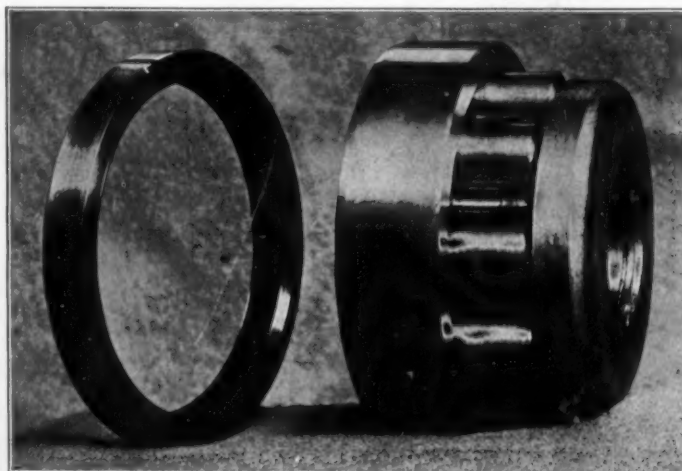
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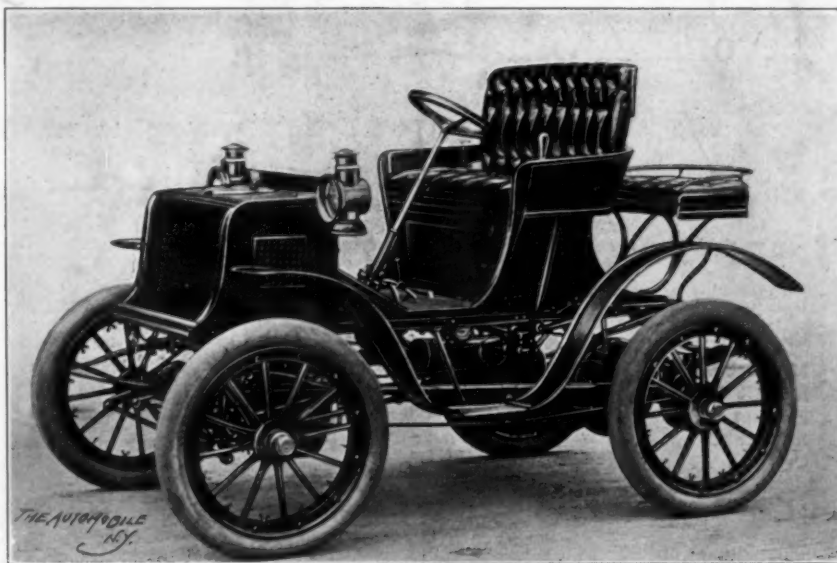
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